

**FLORENCE COPPER INC.**

1575 W. Hunt Highway, Florence, Arizona 85132 USA

florencecopper.com

April 28, 2020

U.S. Environmental Protection Agency, Region 9
Drinking Water Protection Section (WTR 3-2)
75 Hawthorne Street
San Francisco, California 94105

Attention: David Albright, Manager, Ground Water Office

Subject: First Quarter 2020 Monitoring Report
Underground Injection Control (UIC) Permit No. R9UIC-AZ3-FY11-1

Dear Mr. Albright:

Florence Copper Inc. is regulated under UIC Permit No. R9UIC-AZ3-FY11-1, issued December 20, 2016, for a Production Test Facility (PTF). The facility began active operations on December 15, 2018. This report outlines the reporting requirements in accordance with Part II.G.2 of that Permit.

Background Information

The Florence Copper Project is an in-situ copper extraction facility subject to three related permits issued by the U.S. Environmental Protection Agency (USEPA) and the Arizona Department of Environmental Quality (ADEQ).

Aquifer Protection Permit (APP) Covering the 1997-98 BHP Pilot Facilities and Future Operations (Sitewide APP):

- ADEQ APP No. P-101704 (LTF 65804) dated October 13, 2017.

Under the Sitewide APP, a test wellfield, a small leachate processing facility, and a double-lined evaporation pond were constructed. The Pilot Test Facility operated from October 31, 1997 to February 9, 1998. The test wellfield was rinsed until September 1, 2004. Cessation of hydraulic control for testing was approved by both agencies and the wellfield has since remained inactive. Subsequently, no Sitewide permit-related activities have taken place. The authorized facilities and monitoring wells are identified on Figure 1.

Permits Covering the Current Production Test Facility:

- ADEQ Temporary APP No. P-106360 (LTF 80030) dated February 13, 2020; and
- USEPA UIC Permit No. R9UIC-AZ3-FY11-1 dated December 20, 2016.

These permits authorize operation of the PTF and set forth separate monitoring requirements to be applied at the PTF, which lies within the area covered by the Sitewide APP. The Temporary APP and UIC facilities and monitoring wells are identified on Figure 1. The PTF wellfield is shown on Figure 2. The facility received authorization to proceed with pre-operational activities on July 13, 2017, and the PTF wellfield was completed and began operations on December 15, 2018.

This report documents monitoring activities required by the UIC permit during first quarter (Q1) 2020. Reporting for the Sitewide and Temporary APP permits is performed separately; however, some information pertains to multiple permits and is reported accordingly.

PTF Operations Quarterly Reporting

■ **Part II.G.2.a – Map of Operational Status and Groundwater Contours**

The monthly groundwater contour maps are included as Attachment 1. The operational status of the PTF facility was ACTIVE during Q1 2020.

■ **Part II.G.2.b – Table and Graphs of Injected and Recovered Volumes**

The daily cumulative injection and recovery volumes, and the daily percent recovery to injection volume values, are provided in tabular and graphical format in Attachment 2. Throughout Q1 2020, the extracted volume has consistently exceeded the injected volume.

■ **Part II.G.2.c – Table and Graphs of the Well Head Measurements in the PTF**

The daily average head measurement values for the observation wells and recovery wells are provided in tabular and graphical format in Attachment 3. The hydraulic gradient has been maintained with a greater than 1-foot differential as a daily average throughout Q1 2020.

■ **Part II.G.2.d – Table and Graphs of Fluid Electrical Conductivity Measurements**

Fluid electrical conductivity values are provided in tabular and graphical format in Attachment 4. There were no instances where observation well measurements were greater than injection well readings during Q1 2020.

■ **Part II.G.2.e – Table and Graphs of Bulk Electrical Conductivity Measurements**

Bulk electrical conductivity (EC) values are provided in tabular and graphical format in Attachment 5. Bulk EC Alert Level (AL) exceedances confirmed for the following sensor pairs during Q4 2019 generally continued in Q1 2020 until bulk EC ALs were revised by the amended Temporary APP issued on February 13, 2020:

- Horizon 1, between wells O-05 and O-06;
- Horizon 1, between wells O-06 and O-07;
- Horizon 2, between wells O-05 to O-06;
- Horizon 3, between wells O-05 to O-06; and
- Horizon 3, between wells O-05 to O-07.

Following the issuance of the revised bulk EC ALs in the February 13, 2020 Temporary APP, no bulk EC AL exceedances occurred. Refer to Attachment 5 for details.

■ **Part II.G.2.f – Table and Graphs of Monitor Well Water Levels and Analytical Results**

The Q1 2020 Compliance Monitoring Report is provided in Attachment 6 and presents the tabular results of groundwater elevations, analytical results, field parameters, and ALs and Aquifer Quality Limits (AQL) for wells regulated under the UIC permit and Temporary APP. The Compliance Monitoring Report also provides a narrative summary of the Q1 2020 monitoring activities, a discussion of exceedances, and graphical presentation of monitoring results for a select set of parameters since the inception of monitoring.

- **Part II.G.2.g – Results of Monthly Lixiviant Organic Analysis**
The analytical results for monthly lixiviant organic analysis are provided in tabular format in Attachment 7. The monthly organic concentrations were below the AL throughout Q1 2020.
- **Part II.G.2.h – Results of Monitoring Required if Injection Fluid is Modified**
No modifications were made to the injection fluid composition during Q1 2020.
- **Part II.G.2.i – Results of Mechanical Integrity Testing**
Temperature logging of multi-level sampling wells WB-01, WB02, WB-03, and WB-04 was conducted during Q1 2020 to demonstrate mechanical integrity. A summary of results is provided in Attachment 8. Temperature logs in each of the four wells showed no anomalies that would indicate there is flow behind the well casings. A report of the temperature logging of the wells has been provided to the USEPA under separate cover.
- **Part II.G.2.j – Results of Annular Conductivity Device (ACD) Monitoring**
The results of the Q1 2020 well bore annular EC monitoring are provided in Attachment 9. Annular EC readings have remained approximately constant or increased slightly in 8 of the 11 wells since monitoring began in Q3 2018. Annual EC has decreased in wells O-04, O-06, and WB-01 during that same time. The results of the monitoring indicate the absence of injected fluid at the ACD locations.
- **Part II.G.2.k – Summary of Plugging and Abandonment Activity**
No plugging or abandonment activity was performed during Q1 2020.
- **Part II.G.2.l – Summary of Closure Operations**
No closure operations were conducted during Q1 2020.
- **Part II.G.2.m – Table of Monthly Casing Annulus and Injection Pressures**
Monthly maximum, minimum, and average injection pressures are provided in Attachment 10. There were no exceedances of the injection pressure limit during Q1 2020.
- **Appendix H – Migratory Bird Landings and Mortality**
Daily inspection of the Process Solution Impoundment was conducted to record any migratory bird landings and/or identify any migratory bird mortality. As summarized in Attachment 11, no landing events or bird mortalities were observed during Q1 2020.

Please contact me at (520) 316-3710 with any questions regarding the content of this document.

Sincerely,
Florence Copper Inc.



Brent Berg
General Manager

Enclosures:

Figure 1 – Groundwater Monitoring Area

Figure 2 – PTF Wellfield

Attachment 1 – Map of Operational Status and Groundwater Contours

Attachment 2 – Table and Graphs of Injected and Recovered Volumes

Attachment 3 – Table and Graphs of the Well Head Measurements in the Production Test Facility

Attachment 4 – Table and Graphs of Fluid Electrical Conductivity Measurements

Attachment 5 – Table and Graphs of Bulk Electrical Conductivity Measurements

Attachment 6 – Table and Graphs of Monitor Well Water Levels and Analytical Results

Attachment 7 – Results of Monthly Lixiviant Organic Analysis

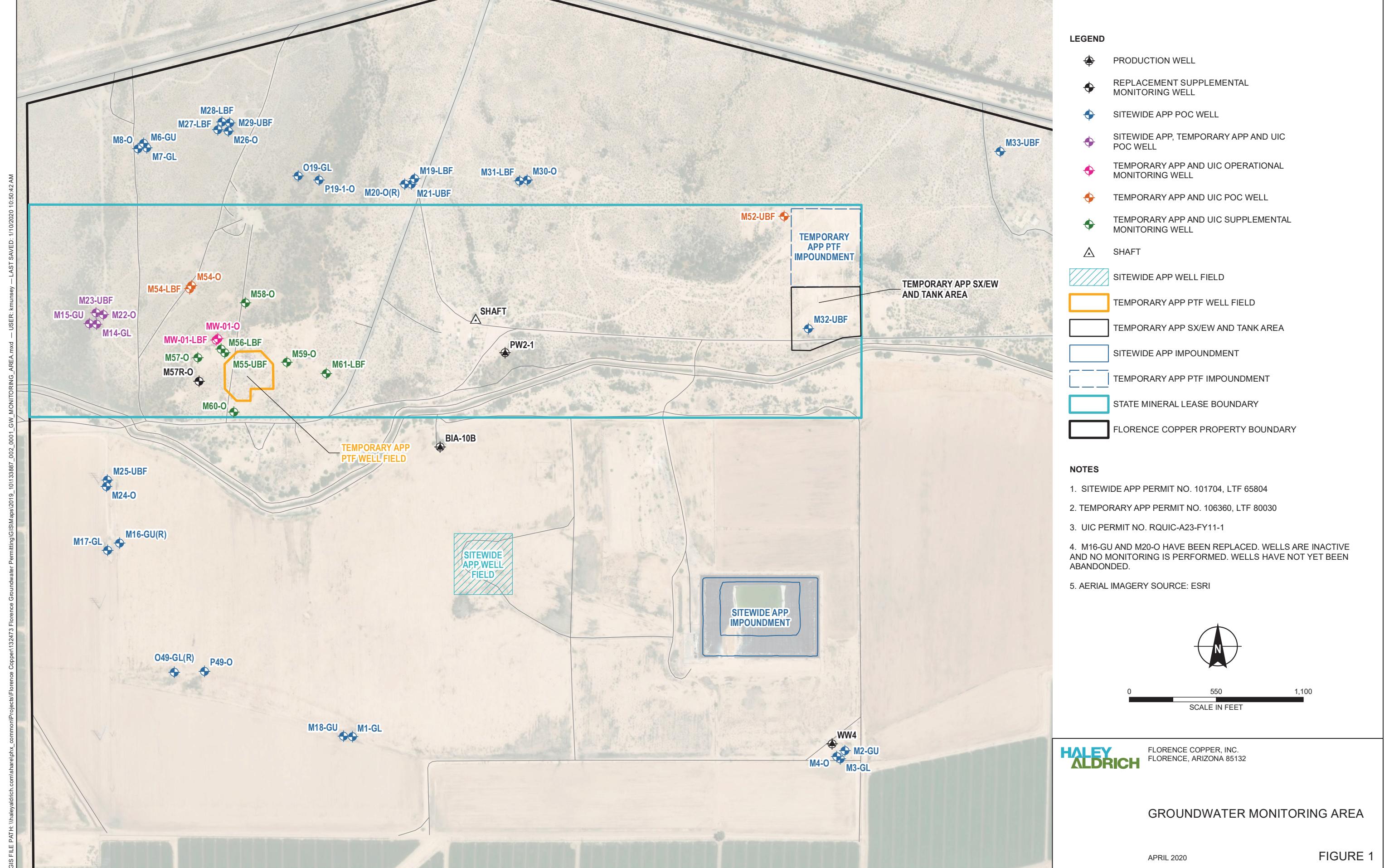
Attachment 8 – Results of Mechanical Integrity Testing

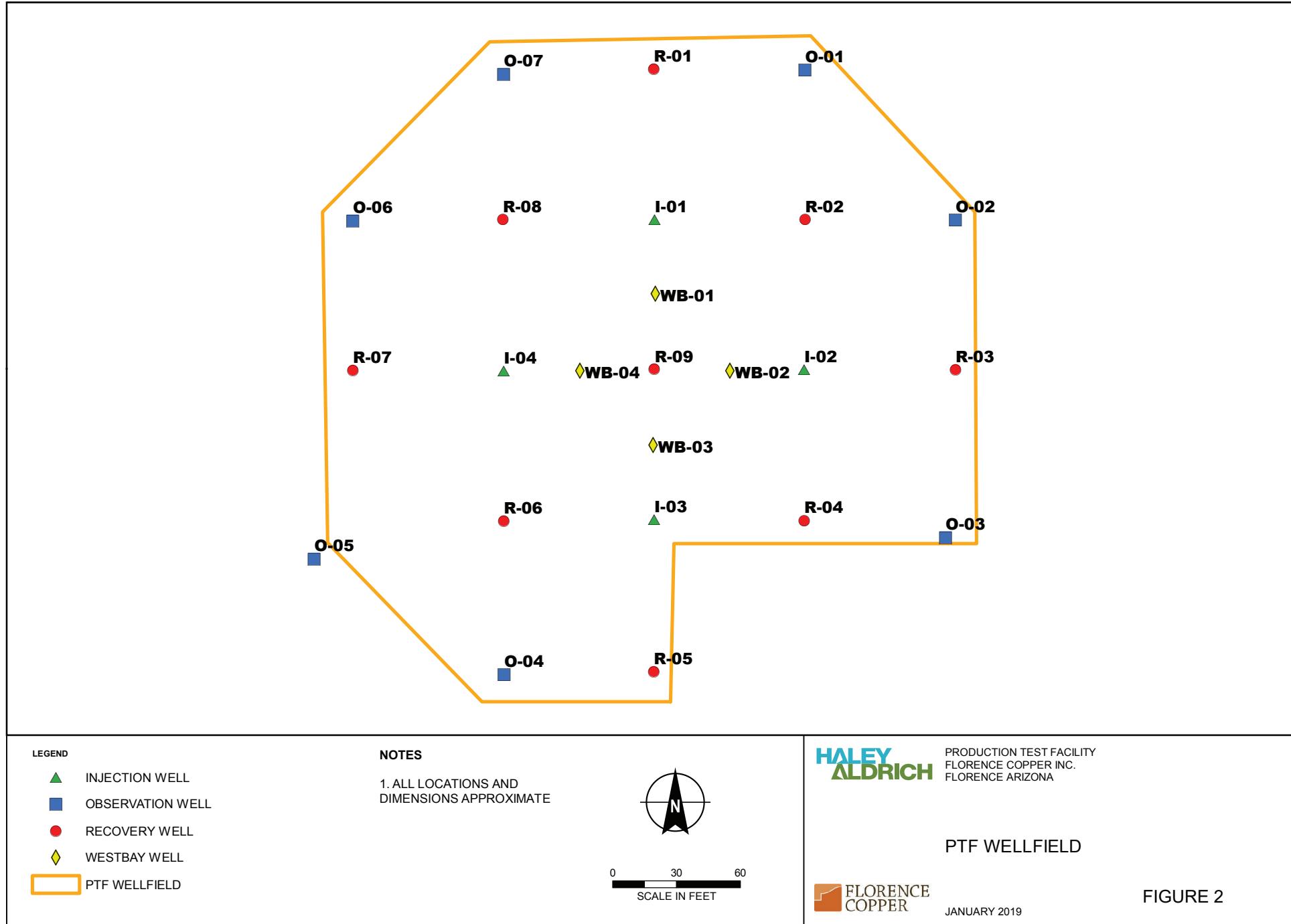
Attachment 9 – Results of Annular Conductivity Device Monitoring

Attachment 10 – Table of Monthly Casing Annulus and Injection Pressures

Attachment 11 – Migratory Bird Landings

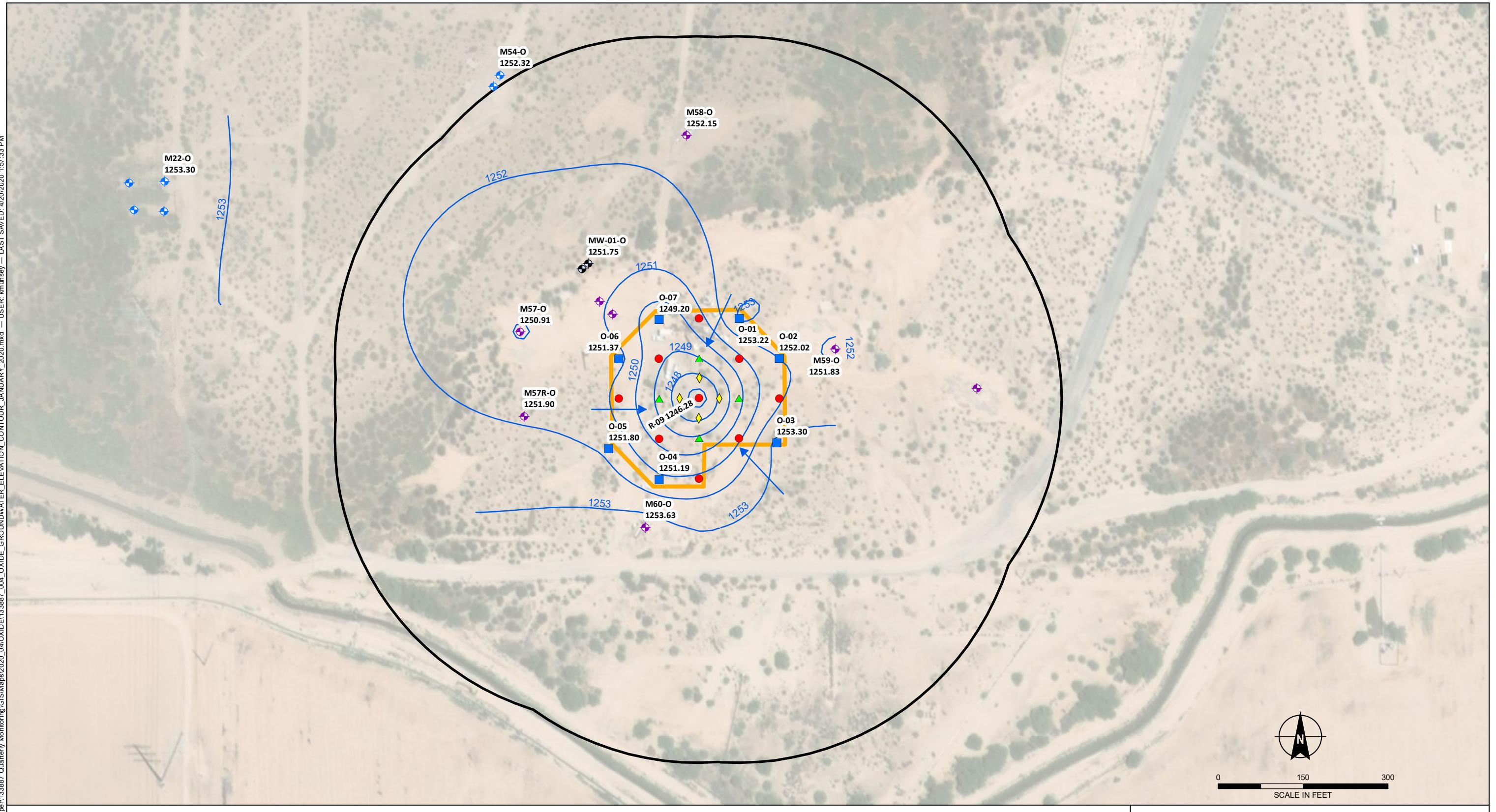
FIGURES





ATTACHMENT 1

Map of Operational Status and Groundwater Contours



█ OBSERVATION WELL
▲ INJECTION WELL
● RECOVERY WELL
◆ WESTBAY WELL
◆ POC WELL
◆ SUPPLEMENTAL MONITORING WELL
◆ OPERATIONAL MONITORING WELL

— JANUARY 2020 GROUNDWATER ELEVATION CONTOURS
— POLLUTANT MANAGEMENT
— PTF WELLFIELD

WELL ID: M59-O
 GROUNDWATER ELEVATION: 1244.91

NOTES

1. ALL LOCATIONS AND DIMENSIONS APPROXIMATE
2. GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
3. CONTOUR INTERVAL = 1FT
4. WATER LEVEL DATA FROM WELLS COLLECTED 1/7/2020
5. ONLY WELLS COMPLETED IN THE BEDROCK OXIDE THAT HAVE CONTOUR ELEVATIONS LABELED WERE USED IN CONTOURING GROUNDWATER ELEVATIONS

HALEY ALDRICH

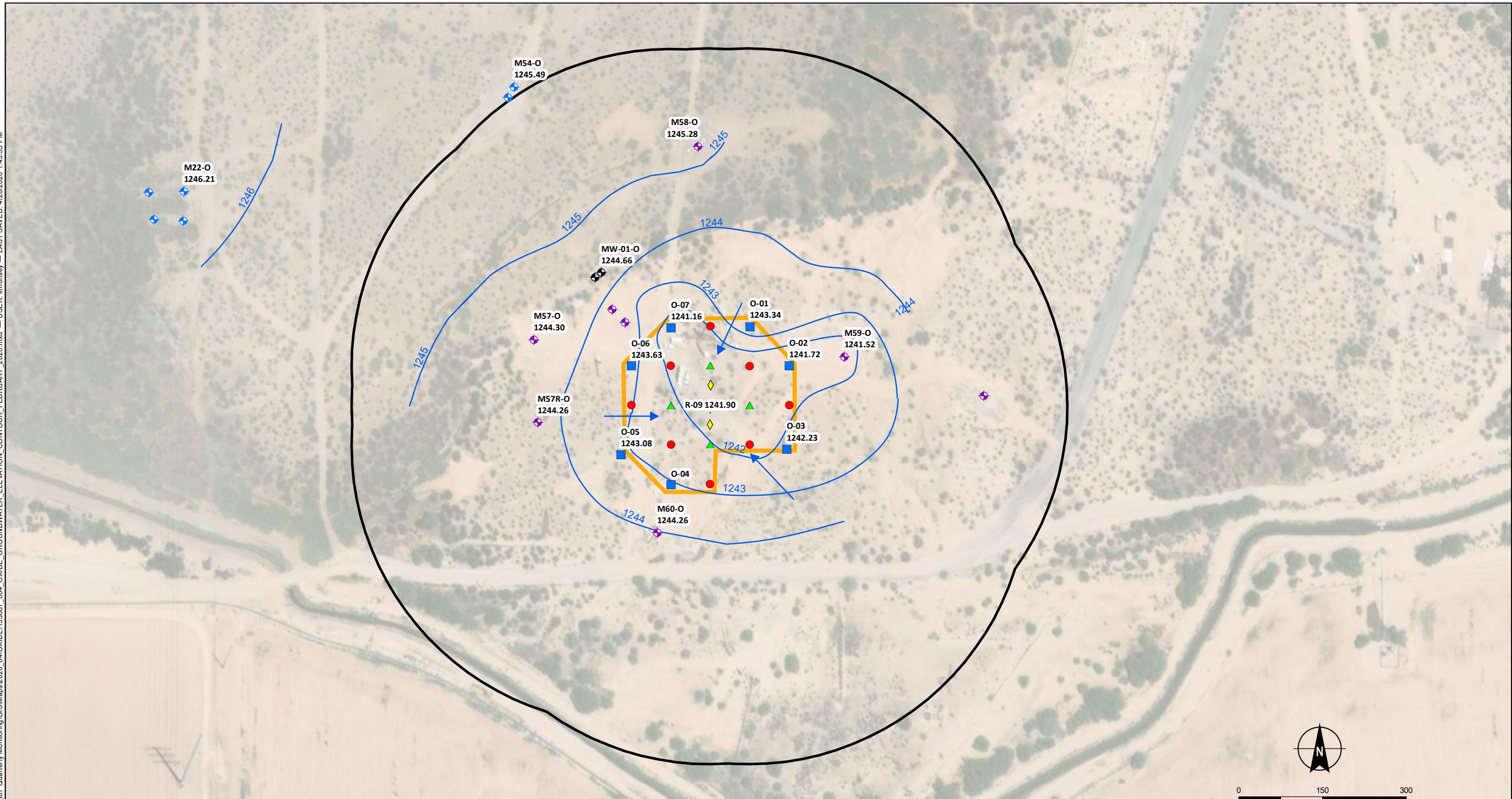
PRODUCTION TEST FACILITY
FLORENCE COPPER, INC.
FLORENCE, ARIZONA

OXIDE GROUNDWATER
ELEVATION CONTOUR
JANUARY 2020

FLORENCE COPPER

APRIL 2020

FIGURE 1



LEGEND

- OBSERVATION WELL (Blue square)
- INJECTION WELL (Green triangle)
- RECOVERY WELL (Red circle)
- WESTBAY WELL (Yellow diamond)
- POC WELL (Blue diamond)
- SUPPLEMENTAL MONITORING WELL (Purple diamond)
- OPERATIONAL MONITORING WELL (Black diamond)

FEBRUARY 2020 GROUNDWATER ELEVATION CONTOURS
POLLUTANT MANAGEMENT
PTF WELLFIELD

WELL ID: M59-O
GROUNDWATER ELEVATION: 1241.52

NOTES

- ALL LOCATIONS AND DIMENSIONS APPROXIMATE
- GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
- CONTOUR INTERVAL = 1FT
- WATER LEVEL DATA FROM WELLS COLLECTED 2/11/2020
- ONLY WELLS COMPLETED IN THE BEDROCK OXIDE THAT HAVE CONTOUR ELEVATIONS LABELED WERE USED IN CONTOURING GROUNDWATER ELEVATIONS
- O-04 WATER LEVEL NOT AVAILABLE ON 2/11/2020; WELL DOWN FOR RECONDITIONING

HALEY ALDRICH

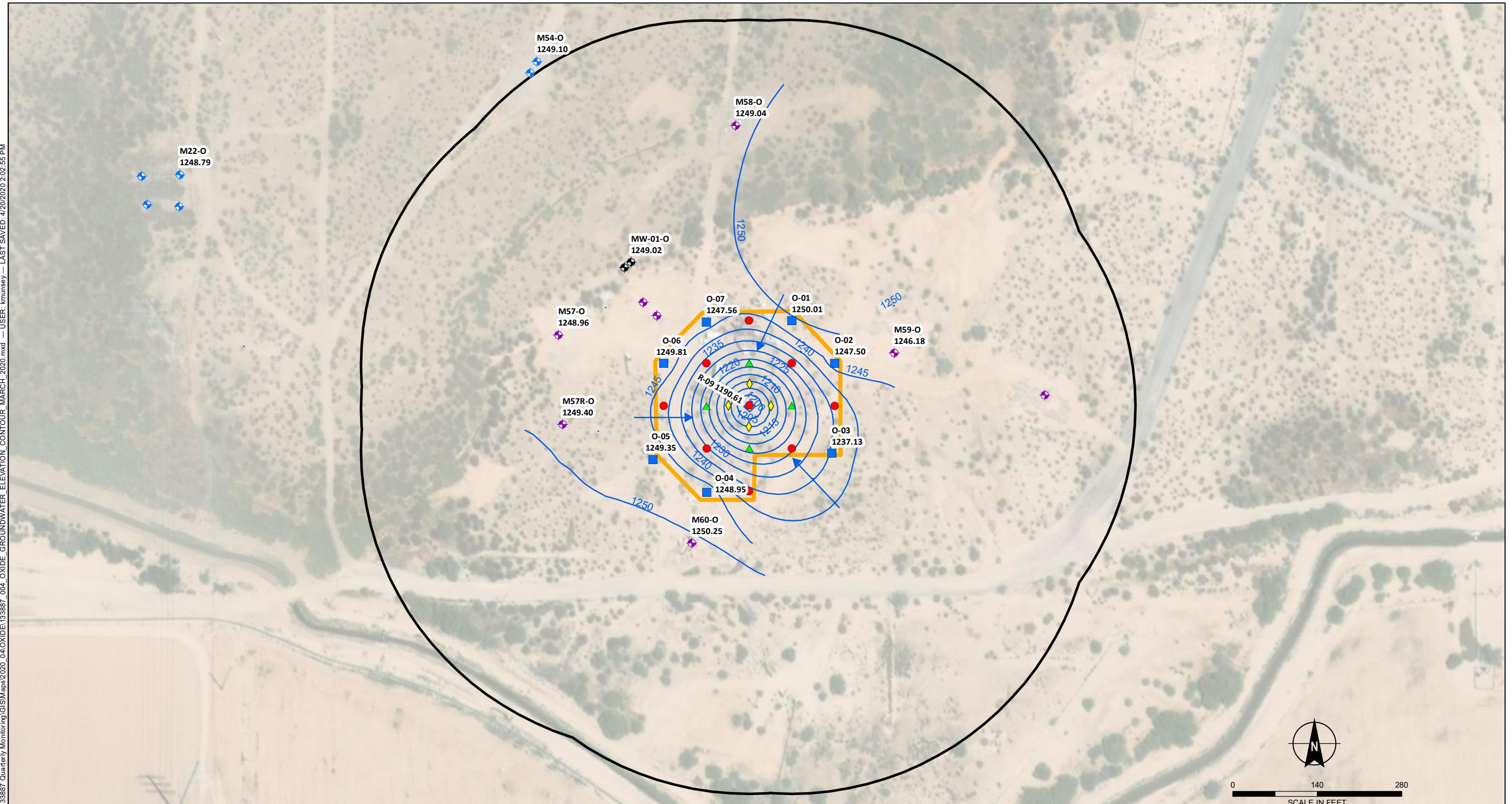
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FLORENCE, ARIZONA

OXIDE GROUNDWATER
ELEVATION CONTOUR
FEBRUARY 2020

FLORENCE COPPER

APRIL 2020

FIGURE 2



GIS FILE PATH: G:\Projects\Florence_Copper\1133887_Quarterly Monitoring\GISMaps\2020_04\04OXDEV\133887_004_OXIDE_GROUNDWATER ELEVATION CONTOUR_MARCH_2020.mxd - USER: kmlunsey - LAST SAVED: 4/20/2020 2:02:55 PM

- OBSERVATION WELL
- ▲ INJECTION WELL
- RECOVERY WELL
- ◆ WESTBAY WELL
- POC WELL
- ◆ SUPPLEMENTAL MONITORING WELL
- OPERATIONAL MONITORING WELL

MARCH 2020 GROUNDWATER ELEVATION CONTOURS

POLLUTANT MANAGEMENT

PTF WELLFIELD

WELL ID
M59-0
1244.91
GROUNDWATER
ELEVATION

NOTE

1. ALL LOCATIONS AND DIMENSIONS APPROXIMATE
 2. GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
 3. CONTOUR INTERVAL = 5FT
 4. WATER LEVEL DATA FROM WELLS COLLECTED 3/9/2019
 5. ONLY WELLS COMPLETED IN THE BEDROCK OXIDE THAT HAVE CONTOUR ELEVATIONS LABELED WERE USED IN CONTOURING GROUNDWATER ELEVATIONS

HALEY
ALDRICH

**PRODUCTION TEST FACILITY
FLORENCE COPPER, INC.
FLORENCE, ARIZONA**

OXIDE GROUNDWATER ELEVATION CONTOUR MARCH 2020

APRIL 2020

FIGURE 3

ATTACHMENT 2

Table and Graphs of Injected and Recovered Volumes

Q1 2020 DAILY INJECTION AND RECOVERY

Page 1 of 3

VOLUMES WITH PERCENT RECOVERY

FLORENCE COPPER INC.

FLORENCE, ARIZONA

Table 1. January 2020 Daily Injection and Recovery Volumes

Date	Daily Injection Volume (gallons)	Daily Recovery Volume (gallons)	Ratio PLS/Raff	% Recovery
1/1/2020	216400	240200	1.11	111
1/2/2020	216200	240800	1.11	111
1/3/2020	217200	241500	1.11	111
1/4/2020	216200	240800	1.11	111
1/5/2020	217600	243100	1.12	112
1/6/2020	216100	243700	1.13	113
1/7/2020	216300	241200	1.12	112
1/8/2020	216300	238200	1.10	110
1/9/2020	216300	238900	1.10	110
1/10/2020	216100	240700	1.11	111
1/11/2020	216300	239800	1.11	111
1/12/2020	216,400	240,400	1.11	111
1/13/2020	216,300	239,300	1.11	111
1/14/2020	215,900	238,000	1.10	110
1/15/2020	216,400	240,200	1.11	111
1/16/2020	216,200	241,100	1.12	112
1/17/2020	217,500	244,500	1.12	112
1/18/2020	215,900	238,200	1.10	110
1/19/2020	216,100	238,400	1.10	110
1/20/2020	217,600	239,700	1.10	110
1/21/2020	213,200	238,700	1.12	112
1/22/2020	214,800	237,800	1.11	111
1/23/2020	218,100	240,400	1.10	110
1/24/2020	216,300	239,300	1.11	111
1/25/2020	216,300	238,900	1.10	110
1/26/2020	216300	239200	1.11	111
1/27/2020	215700	240200	1.11	111
1/28/2020	216200	239100	1.11	111
1/29/2020	215600	238900	1.11	111
1/30/2020	216200	239900	1.11	111
1/31/2020	216300	239800	1.11	111
JAN Averages	216,267	240,037	1.11	111

JAN Averages	Monthly Average Injection Volume (GPM)	Monthly Average Recovery Volume (GPM)
	150	167

Notes:

% = percent

GPM = gallons per minute

PLS = pregnant leach solution

Raff = raffinate

VOLUMES WITH PERCENT RECOVERY

FLORENCE COPPER INC.

FLORENCE, ARIZONA

Table 2. February 2020 Daily Injection and Recovery Volumes

Date	Daily Injection Volume (gallons)	Daily Recovery Volume (gallons)	Ratio PLS/Raff	% Recovery
2/1/2020	216,400	238,600	1.10	110
2/2/2020	216,300	240,000	1.11	111
2/3/2020	216,200	239,300	1.11	111
2/4/2020	216,100	239,500	1.11	111
2/5/2020	216,700	241,200	1.11	111
2/6/2020	244,400	271,000	1.11	111
2/7/2020	259,500	287,300	1.11	111
2/8/2020	259,400	286,400	1.10	110
2/9/2020	259,600	287,700	1.11	111
2/10/2020	259,400	288,900	1.11	111
2/11/2020	259,400	287,300	1.11	111
2/12/2020	259,500	287,100	1.11	111
2/13/2020	259,500	288,600	1.11	111
2/14/2020	259,500	288,200	1.11	111
2/15/2020	259,500	289,900	1.12	112
2/16/2020	258,800	290,700	1.12	112
2/17/2020	258,900	289,100	1.12	112
2/18/2020	259,500	290,400	1.12	112
2/19/2020	259,600	288,200	1.11	111
2/20/2020	259,500	290,900	1.12	112
2/21/2020	259,500	287,700	1.11	111
2/22/2020	239,800	278,800	1.16	116
2/23/2020	245,100	291,700	1.19	119
2/24/2020	252,000	290,900	1.15	115
2/25/2020	259,700	292,600	1.13	113
2/26/2020	271,300	302,500	1.12	112
2/27/2020	282,000	313,600	1.11	111
2/28/2020	284,200	315,600	1.11	111
2/29/2020	283,800	316,500	1.12	112
FEB Averages	252,934	282,766	1.12	112

FEB Averages	Monthly Average Injection Volume (GPM)	Monthly Average Recovery Volume (GPM)
	176	196

Notes:

% = percent

GPM = gallons per minute

PLS = pregnant leach solution

Raff = raffinate

Q1 2020 DAILY INJECTION AND RECOVERY

Page 3 of 3

VOLUMES WITH PERCENT RECOVERY

FLORENCE COPPER INC.

FLORENCE, ARIZONA

Table 3. March 2020 Daily Injection and Recovery Volumes

Date	Daily Injection Volume (gallons)	Daily Recovery Volume (gallons)	Ratio PLS/Raff	% Recovery
3/1/2020	285,500	314,900	1.10	110
3/2/2020	284,400	318,600	1.12	112
3/3/2020	285,600	318,000	1.11	111
3/4/2020	285,500	316,400	1.11	111
3/5/2020	285,500	315,500	1.11	111
3/6/2020	285,500	314,800	1.10	110
3/7/2020	285,900	320,100	1.12	112
3/8/2020	285,400	318,600	1.12	112
3/9/2020	283,300	319,700	1.13	113
3/10/2020	285,500	318,400	1.12	112
3/11/2020	285,300	318,400	1.12	112
3/12/2020	283,500	320,800	1.13	113
3/13/2020	285,500	323,100	1.13	113
3/14/2020	284,000	321,100	1.13	113
3/15/2020	285,400	319,900	1.12	112
3/16/2020	286,300	322,700	1.13	113
3/17/2020	284,500	316,400	1.11	111
3/18/2020	284,900	316,700	1.11	111
3/19/2020	285,400	316,300	1.11	111
3/20/2020	285,600	316,900	1.11	111
3/21/2020	285,400	316,800	1.11	111
3/22/2020	279,100	312,900	1.12	112
3/23/2020	283,800	316,700	1.12	112
3/24/2020	283,900	316,200	1.11	111
3/25/2020	283,700	317,200	1.12	112
3/26/2020	283,900	317,300	1.12	112
3/27/2020	284,000	316,500	1.11	111
3/28/2020	283,900	317,300	1.12	112
3/29/2020	284,600	319,800	1.12	112
3/30/2020	282,300	315,000	1.12	112
3/31/2020	282,700	318,300	1.13	113
MAR Averages	284,570	317,767	1.12	112

MAR Averages	Monthly Average Injection Volume (GPM)	Monthly Average Recovery Volume (GPM)
	198	221

Notes:

% = percent

GPM = gallons per minute

PLS = pregnant leach solution

Raff = raffinate

Figure 1. Injection vs. Recovery Volumes - January

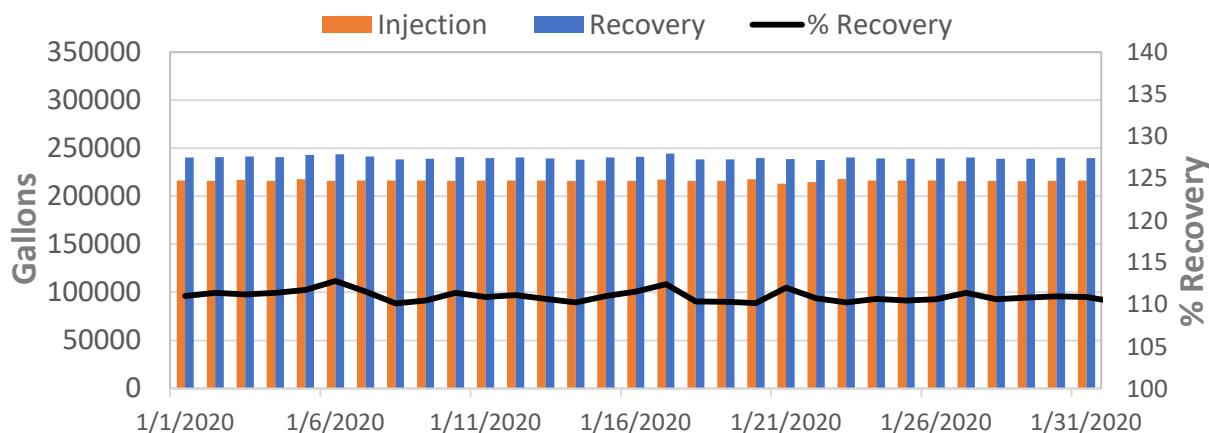


Figure 2. Injection vs. Recovery Volumes - February

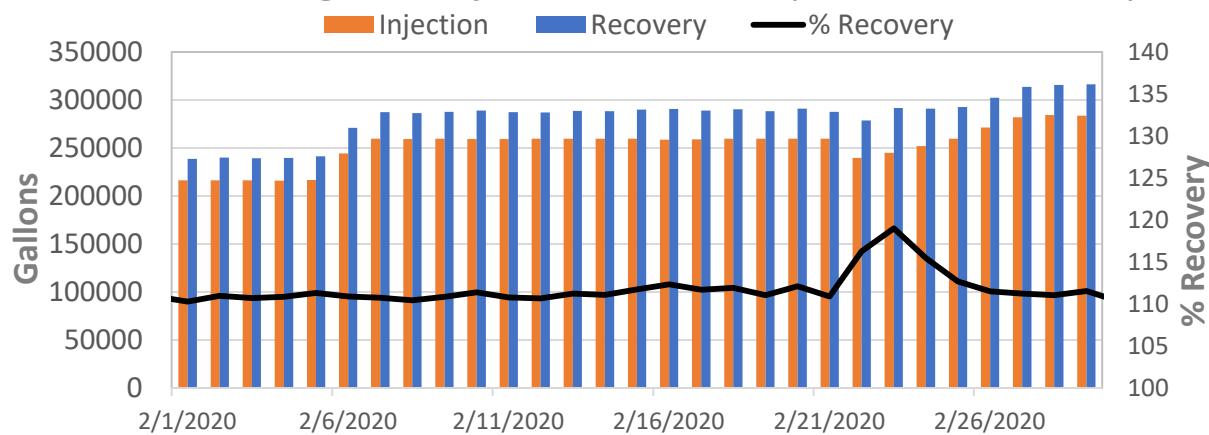
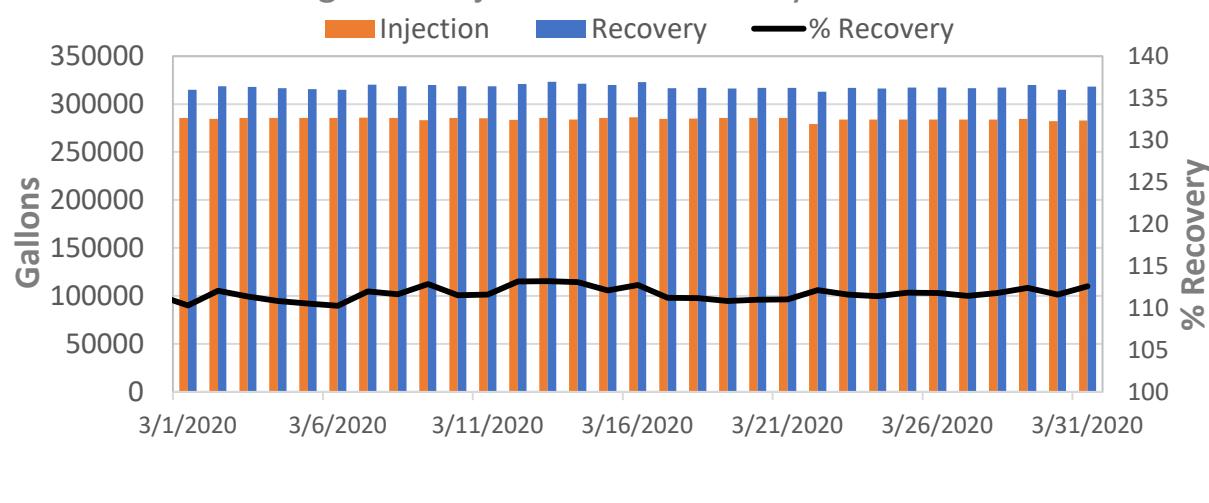


Figure 3. Injection vs. Recovery Volumes - March



ATTACHMENT 3

Table and Graphs of the Well Head Measurements in the Production Test Facility

Table 1. January 2020 Daily Average Water Level Elevations

Date	R-01	O-01	O-07	R-02	O-01	O-02	R-03	O-02	O-03	R-04	O-03	R-05	O-04	R-06	O-04	O-05	R-07	O-05	O-06	R-08	O-06	O-07	R-09
1/1/2020	1244.32	1251.62	1251.50	1222.62	1251.62	1250.90	1199.12	1250.90	1254.06	1159.75	1254.06	1212.17	1251.92	1211.24	1251.92	1252.02	1250.07	1252.02	1251.67	1244.47	1251.67	1251.50	1212.71
1/2/2020	1244.53	1251.71	1251.74	1221.85	1251.71	1251.03	1198.90	1251.03	1254.16	1159.48	1254.16	1212.03	1252.19	1212.71	1252.19	1252.33	1250.42	1252.33	1251.87	1244.11	1251.87	1251.74	1213.41
1/3/2020	1245.59	1251.90	1251.95	1219.67	1251.90	1251.13	1198.21	1251.13	1254.98	1155.38	1254.98	1210.20	1252.28	1210.78	1252.28	1252.48	1250.55	1252.48	1252.06	1243.26	1252.06	1251.95	1212.27
1/4/2020	1245.73	1253.06	1252.24	1218.12	1253.06	1252.40	1200.17	1252.40	1255.09	1135.79	1255.09	1210.28	1252.39	1212.75	1252.39	1252.55	1250.53	1252.55	1252.11	1240.85	1252.11	1252.24	1215.45
1/5/2020	1245.46	1252.68	1252.19	1224.56	1252.68	1251.95	1198.18	1251.95	1255.30	1147.06	1255.30	1210.27	1252.40	1212.45	1252.40	1252.59	1250.53	1252.59	1252.18	1241.38	1252.18	1252.19	1214.57
1/6/2020	1245.22	1253.43	1251.21	1223.35	1253.43	1252.42	1200.18	1252.42	1254.42	1164.84	1254.42	1212.63	1250.96	1216.90	1250.96	1251.29	1248.69	1251.29	1250.69	1240.42	1250.69	1251.21	1243.12
1/7/2020	1245.80	1253.22	1249.20	1222.34	1253.22	1252.02	1200.62	1252.02	1253.30	1164.11	1253.30	1212.55	1251.19	1220.50	1251.19	1251.80	1249.20	1251.80	1251.37	1240.97	1251.37	1249.20	1246.28
1/8/2020	1246.10	1252.76	1251.82	1223.02	1252.76	1251.41	1199.78	1251.41	1252.55	1163.25	1252.55	1211.93	1251.53	1222.59	1251.53	1252.65	1250.40	1252.65	1252.22	1242.89	1252.22	1251.82	1257.27
1/9/2020	1245.72	1252.04	1251.21	1222.03	1252.04	1250.75	1198.52	1250.75	NA	1159.42	NA	1211.03	1251.17	1222.87	1251.17	1252.35	1250.14	1252.35	1251.72	1242.97	1251.72	1251.21	1266.24
1/10/2020	1245.86	1252.15	1251.40	1220.87	1252.15	1250.78	1198.70	1250.78	NA	1156.68	NA	1209.92	1251.33	1220.41	1251.33	1252.58	1250.38	1252.58	1251.87	1242.82	1251.87	1251.40	1265.40
1/11/2020	1246.19	1252.76	1251.89	1221.54	1252.76	1251.44	1199.05	1251.44	NA	1158.13	NA	1210.50	1251.76	1220.13	1251.76	1252.99	1250.86	1252.99	1252.33	1243.77	1252.33	1251.89	1262.33
1/12/2020	1246.32	1252.82	1251.98	1220.02	1252.82	1251.53	1200.38	1251.53	NA	1157.77	NA	1211.35	1251.93	1220.65	1251.93	1253.16	1250.98	1253.16	1252.41	1243.53	1252.41	1251.98	1250.21
1/13/2020	1247.37	1254.12	1252.68	1221.10	1254.12	1252.44	1198.04	1252.44	1251.26	1154.23	1251.26	1210.15	1251.56	1222.47	1251.56	1253.39	1251.58	1253.39	1252.97	1245.36	1252.97	1252.68	1246.01
1/14/2020	1244.97	1254.43	1252.71	1222.76	1254.43	1252.68	1192.77	1252.68	1251.86	1157.35	1251.86	1210.12	1252.07	1220.45	1252.07	1253.91	1251.55	1253.91	1252.89	1245.50	1252.89	1252.71	1251.86
1/15/2020	1245.23	1253.65	1252.00	1222.60	1253.65	1252.09	1195.70	1252.09	1250.97	1156.44	1250.97	1209.49	1251.33	1220.18	1251.33	1252.85	1250.55	1252.85	1252.00	1245.06	1252.00	1252.00	1243.21
1/16/2020	1245.75	1252.51	1251.26	1215.71	1252.51	1251.12	1195.44	1251.12	1252.15	1142.50	1252.15	1210.34	1251.77	1218.12	1251.77	1252.55	1250.98	1252.55	1252.19	1241.68	1252.19	1251.26	1244.99
1/17/2020	1243.24	1251.36	1250.16	1219.53	1251.36	1250.91	1206.35	1250.91	1252.45	1181.63	1252.45	1213.25	1250.67	1200.95	1250.67	1251.29	1249.47	1251.29	1251.01	1242.67	1251.01	1250.16	1243.66
1/18/2020	1244.48	1252.33	1251.04	1223.49	1252.33	1251.56	1197.91	1251.56	1252.19	1186.33	1252.19	1212.92	1251.10	1209.49	1251.10	1251.98	1250.36	1251.98	1251.95	1243.90	1251.95	1251.04	1244.40
1/19/2020	1246.06	1252.15	1251.11	1222.18	1252.15	1251.01	1199.86	1251.01	1251.33	1179.60	1251.33	1211.52	1251.06	1217.54	1251.06	1252.15	1250.55	1252.15	1252.13	1244.26	1252.13	1251.11	1245.24
1/20/2020	1245.84	1252.08	1250.94	1220.25	1252.08	1250.93	1200.24	1250.93	1251.29	1177.37	1251.29	1210.89	1250.79	1216.06	1250.79	1251.86	1249.98	1251.86	1251.87	1244.37	1251.87	1250.94	1244.63
1/21/2020	1245.55	1250.95	1250.73	1216.29	1250.95	1249.13	1198.36	1249.13	1247.76	1173.64	1247.76	1209.35	1250.66	1218.64	1250.66	1251.93	1250.13	1251.93	1251.85	1245.63	1251.85	1250.73	1243.68
1/22/2020	1244.86	1250.73	1249.91	1218.35	1250.73	1249.24	1198.27	1249.24	1247.83	1172.53	1247.83	1208.75	1249.69	1215.66	1249.69	1250.93	1249.11	1250.93	1250.84	1244.40	1250.84	1249.91	1243.36
1/23/2020	1244.17	1250.40	1249.31	1217.45	1250.40	1249.28	1201.00	1249.28	1248.51	1177.62	1248.51	1208.22	1249.08	1215.05	1249.08	1250.13	1248.17	1250.13	1250.15	1242.90	1250.15	1249.31	1243.38
1/24/2020	1244.40	1250.63	1249.63	1218.42	1250.63	1249.48	1200.72	1249.48	1247.88	1182.15	1247.88	1209.54	1249.49	1215.45									

Table 2. February 2020 Daily Average Water Level Elevations

Date	R-01	O-01	O-07	R-02	O-01	O-02	R-03	O-02	O-03	R-04	O-03	R-05	O-04	R-06	O-04	O-05	R-07	O-05	O-06	R-08	O-06	O-07	R-09
2/1/2020	1245.85	1252.06	1251.13	1222.00	1252.06	1250.77	1200.72	1250.77	1250.67	1171.09	1250.67	1208.79	1250.36	1211.73	1250.36	1252.12	1250.03	1252.12	1252.22	1245.20	1252.22	1251.13	1246.72
2/2/2020	1244.28	1250.56	1249.57	1220.29	1250.56	1249.24	1198.98	1249.24	1249.15	1168.69	1249.15	1206.96	1248.73	1210.78	1248.73	1250.50	1248.50	1250.50	1250.68	1243.89	1250.68	1249.57	1245.543
2/3/2020	1243.49	1249.64	1248.74	1219.15	1249.64	1248.31	1197.71	1248.31	1248.12	1166.87	1248.12	1206.10	1247.82	1209.56	1247.82	1249.62	1247.75	1249.62	1250.28	1243.30	1250.28	1248.74	1245.387
2/4/2020	1242.98	1249.23	1246.85	1218.67	1249.23	1247.98	1196.69	1247.98	1249.17	1165.82	1249.17	1205.17	1222.35	1207.15	1222.35	1248.93	1246.85	1248.93	NA	1243.04	NA	1246.85	1244.812
2/5/2020	1241.81	1248.51	1247.98	1217.76	1248.51	1247.29	1196.21	1247.29	1248.33	1164.29	1248.33	1204.00	1237.64	1203.90	1237.64	1248.18	1246.11	1248.18	1248.55	1242.49	1248.55	1247.98	1244.153
2/6/2020	1240.60	1247.16	NA	1216.03	1247.16	1245.95	1193.68	1245.95	1247.93	1161.91	1247.93	1202.43	1246.44	1202.89	1246.44	1247.11	1245.07	1247.11	1247.43	1241.45	1247.43	NA	1244.457
2/7/2020	1239.08	1245.98	1243.28	1214.45	1245.98	1244.64	1191.72	1244.64	1246.44	1159.49	1246.44	1200.65	1245.07	1201.45	1245.07	1245.86	1243.99	1245.86	1246.19	1240.52	1246.19	1243.28	1243.951
2/8/2020	1237.98	1244.73	1242.06	1212.91	1244.73	1243.33	1191.30	1243.33	1246.29	1157.23	1246.29	1198.81	1243.44	1201.77	1243.44	1244.34	1242.52	1244.34	1244.82	1239.27	1244.82	1242.06	1242.334
2/9/2020	1236.85	1243.55	1240.98	1211.21	1243.55	1242.14	1189.16	1242.14	1242.49	1157.85	1242.49	1197.23	1242.36	1200.34	1242.36	1243.28	1241.42	1243.28	1243.76	1237.50	1243.76	1240.98	1241.753
2/10/2020	1236.22	1242.91	1240.65	1210.66	1242.91	1241.48	1186.90	1241.48	1243.07	1155.86	1243.07	1196.82	1242.04	1198.80	1242.04	1242.75	1240.88	1242.75	1243.27	1237.75	1243.27	1240.65	1241.361
2/11/2020	1236.67	1243.34	1241.16	1210.72	1243.34	1241.72	1186.22	1241.72	1242.23	1154.86	1242.23	1197.07	NA	1199.40	NA	1243.08	1241.24	1243.08	1243.63	1238.45	1243.63	1241.16	1241.902
2/12/2020	1236.86	1243.55	1241.34	1210.87	1243.55	1242.07	1187.88	1242.07	1243.01	1154.70	1243.01	1197.47	1242.11	1199.03	1242.11	1243.33	1241.36	1243.33	1243.81	1238.84	1243.81	1241.34	1241.858
2/13/2020	1237.28	NA	1242.02	1210.51	NA	1241.85	1185.93	1241.85	1244.72	1149.20	1244.72	1198.14	1243.37	1199.41	1243.37	1244.36	1242.27	1244.36	1244.64	1239.64	1244.64	1242.02	1242.923
2/14/2020	1238.78	1245.45	1243.49	1211.93	1245.45	1243.68	1184.62	1243.68	1245.75	1143.58	1245.75	1198.90	1244.74	1200.66	1244.74	1245.82	1244.06	1245.82	1246.19	1241.24	1246.19	1243.49	1245.011
2/15/2020	1239.97	1246.13	1244.59	1213.10	1246.13	1244.98	1186.11	1244.98	1247.42	1144.13	1247.42	1199.95	1245.97	1200.86	1245.97	1246.89	1244.91	1246.89	1247.29	1242.49	1247.29	1244.59	1245.476
2/16/2020	1241.17	1247.38	1245.89	1214.13	1247.38	1246.20	1186.49	1246.20	1249.45	1144.62	1249.45	1201.29	1247.54	1202.36	1247.54	1248.36	1246.31	1248.36	1248.65	1243.50	1248.65	1245.89	1247.437
2/17/2020	1242.08	NA	1245.54	1214.86	NA	1247.00	1186.33	1247.00	1249.82	1144.90	1249.82	1201.95	1245.63	1199.42	1245.63	1249.50	1247.62	1249.50	1249.06	1242.62	1249.06	1245.54	1248.851
2/18/2020	1243.29	1249.80	1247.94	1215.63	1249.80	1247.54	1187.54	1247.54	1253.18	1145.62	1253.18	1203.28	1250.69	1204.47	1250.69	1250.55	1248.43	1250.55	1250.81	1245.69	1250.81	1247.94	1249.782
2/19/2020	1243.44	1249.98	1248.30	1215.36	1249.98	NA	1186.93	NA	1253.24	1144.99	1253.24	1203.56	1251.05	1204.27	1251.05	1251.22	1249.27	1251.22	1251.29	1245.88	1251.29	1248.30	1250.334
2/20/2020	1243.58	1249.96	1248.25	1215.14	1249.96	NA	1186.66	NA	1252.09	1144.20	1252.09	1203.30	1250.94	1203.54	1250.94	1251.10	1248.72	1251.10	1251.15	1245.94	1251.15	1248.25	1250.28
2/21/2020	1243.81	1250.24	1248.60	1215.08	1250.24	1248.72	1186.63	1248.72	1255.44	1144.00	1255.44	1204.11	1251.35	1203.44	1251.35	1251.56	1249.40	1251.56	1251.52	1246.28	1251.52	1248.60	1251.413
2/22/2020	1242.53	1252.75	1251.09	1163.79	1252.75	1249.51	1179.06	1249.51	1251.95	1125.63	1251.95	1142.69	1251.96	1190.61	1251.96	1253.27	1250.94	1253.27	1253.69	1240.52	1253.69	1251.09	1252.616
2/23/2020	1240.99	1252.16	1250.55	1155.72	1252.16	1248.63	1178.29	1248.63	1251.17	1137.40	1251.17	1131.73	1251.47	NA	1251.47	1252.89	1250.57	1252.89	1253.13	1237.80	1253.13	1250.55	1185.124
2/24/2020	1242.78	1252.70	1251.16	1154.35	1252.70	1249.16	1178.22	1249.16	1252.32	1145.15	1252.32	1142.87	1251.61	1196.65	1251.61	1252.90	1250.85	1252.90	1253.49	1238.47	12		

Table 3. March 2020 Daily Average Water Level Elevations

Date	R-01	O-01	O-07	R-02	O-01	O-02	R-03	O-02	O-03	R-04	O-03	R-05	O-04	R-06	O-04	O-05	R-07	O-05	O-06	R-08	O-06	O-07	R-09
3/1/2020	1239.22	1248.27	1246.01	1207.08	1248.27	1246.04	1177.86	1246.04	1247.98	1125.45	1247.98	1198.07	1247.63	1186.50	1247.63	1247.71	1245.06	1247.71	1248.03	1233.76	1248.03	1246.01	1190.821
3/2/2020	1240.02	1248.27	1246.01	1162.47	1250.07	1246.65	1177.73	1246.65	1245.82	1124.20	1245.82	1139.30	1247.53	1187.79	1247.53	1248.88	1246.73	1248.88	1249.79	1224.52	1249.79	1247.96	1188.346
3/3/2020	1239.21	1250.07	1247.96	1189.74	1248.74	1245.85	1177.84	1245.85	1247.78	1124.18	1247.78	1173.27	1247.15	1186.00	1247.15	1248.01	1245.60	1248.01	1248.64	1229.23	1248.64	1246.60	1185.382
3/4/2020	1236.86	1244.95	1243.98	1204.96	1244.95	1241.65	1178.08	1241.65	1240.93	1124.59	1240.93	1193.23	1245.05	1184.90	1245.05	1245.80	1243.25	1245.80	1246.50	1233.02	1246.50	1243.98	1183.65
3/5/2020	1235.84	1243.94	1243.01	1204.04	1243.94	1240.49	1178.05	1240.49	1240.21	1124.18	1240.21	1192.15	1244.04	1183.13	1244.04	1244.88	1242.34	1244.88	1245.58	1232.10	1245.58	1243.01	1184.803
3/6/2020	1237.02	1245.43	1244.06	1207.09	1245.43	1242.44	1177.90	1242.44	1243.68	1124.18	1243.68	1192.02	1245.36	1181.04	1245.36	1245.98	1243.54	1245.98	1246.63	1233.20	1246.63	1244.06	1192.748
3/7/2020	1237.87	1247.03	1244.93	1205.02	1247.03	1244.41	1177.86	1244.41	1247.36	1124.23	1247.36	1183.81	1245.83	1181.54	1245.83	1246.38	1243.61	1246.38	1247.09	1231.70	1247.09	1244.93	1202.476
3/8/2020	1238.75	1248.25	1245.92	1208.96	1248.25	1245.75	1177.97	1245.75	1249.58	1124.18	1249.58	1186.57	1247.00	1186.14	1247.00	1247.49	1244.70	1247.49	1248.11	1232.78	1248.11	1245.92	1197.626
3/9/2020	1240.01	1250.01	1247.56	1210.78	1250.01	1247.50	1178.16	1247.50	1237.13	1124.18	1237.13	1186.67	1248.95	1188.17	1248.95	1249.35	1246.60	1249.35	1249.81	1233.36	1249.81	1247.56	1190.609
3/10/2020	1236.31	1251.16	1247.06	1215.02	1251.16	1249.43	1178.21	1249.43	1256.30	1124.18	1256.30	1189.91	1249.69	1160.63	1249.69	1249.85	1247.06	1249.85	1250.40	1233.82	1250.40	1247.06	1197.263
3/11/2020	1236.04	1251.65	1248.71	1215.36	1251.65	1249.90	NA	1249.90	1256.63	1124.18	1256.63	1189.92	1250.14	1158.77	1250.14	1250.28	1247.52	1250.28	1250.94	1235.46	1250.94	1248.71	1205.92
3/12/2020	1236.15	1252.39	1249.35	1213.34	1252.39	1250.61	NA	1250.61	1257.11	1124.18	1257.11	1187.53	1250.69	1156.06	1250.69	1250.84	1248.16	1250.84	1251.56	1235.48	1251.56	1249.35	1202.272
3/13/2020	1238.51	1252.15	1249.78	1209.72	1252.15	1249.79	1178.03	1249.79	1255.80	1124.18	1255.80	1189.93	1251.65	1195.14	1251.65	1251.93	1249.11	1251.93	1252.27	1238.37	1252.27	1249.78	1206.935
3/14/2020	1240.51	1252.65	1250.56	1204.24	1252.65	1249.96	1177.87	1249.96	1255.67	1124.18	1255.67	1187.06	1252.58	1216.45	1252.58	1253.03	1250.19	1253.03	1253.27	1239.31	1253.27	1250.56	1204.423
3/15/2020	1242.90	1253.36	1250.97	1214.26	1253.36	1250.68	1177.82	1250.68	1256.34	1124.18	1256.34	1188.46	1252.47	1193.73	1252.47	1252.87	1250.18	1252.87	1253.28	1238.24	1253.28	1250.97	1208.86
3/16/2020	1242.73	1253.24	1250.99	1206.97	1253.24	1250.07	1169.25	1250.07	1255.81	1124.18	1255.81	1184.16	1252.49	1199.91	1252.49	1252.97	1250.18	1252.97	1253.42	1237.70	1253.42	1250.99	1205.715
3/17/2020	1243.00	1252.30	1250.32	1186.78	1252.30	1250.22	1179.03	1250.22	1259.45	NA	1259.45	1174.24	1252.54	1207.12	1252.54	1252.67	1249.62	1252.67	1252.58	1231.13	1252.58	1250.32	1208.929
3/18/2020	1243.71	1253.17	1251.01	1185.62	1253.17	1251.37	1182.48	1251.37	1259.32	NA	1259.32	1172.40	1252.94	1204.54	1252.94	1253.10	1250.13	1253.10	1253.11	1232.19	1253.11	1251.01	1208.917
3/19/2020	1244.50	1254.31	1252.04	1193.99	1254.31	1252.31	1183.94	1252.31	1258.92	1177.16	1258.92	1181.31	1253.63	1204.87	1253.63	1254.00	1251.09	1254.00	1254.18	1236.81	1254.18	1252.04	1209.07
3/20/2020	1244.61	1254.76	1252.57	1200.46	1254.76	1252.23	1180.72	1252.23	1257.54	1161.58	1257.54	1187.23	1253.79	1204.98	1253.79	1254.47	1251.66	1254.47	1254.84	1240.50	1254.84	1252.57	1205.23
3/21/2020	1244.15	1253.74	1251.77	1203.31	1253.74	1250.97	1178.65	1250.97	1256.93	1181.84	1256.93	1187.63	1253.23	1203.10	1253.23	1253.75	1250.91	1253.75	1254.12	1240.27	1254.12	1251.77	1208.27
3/22/2020	1244.50	1253.82	1251.96	1203.32	1253.82	1251.12	1179.62	1251.12	1255.67	1181.84	1255.67	1186.52	1253.15	1201.34	1253.15	1253.90	1251.10	1253.90	1243.20	1254.36	1251.96	1202.361	
3/23/2020	1244.46	1253.78	1252.06	1201.96	1253.78	1250.92	1158.83	1250.92	1254.86	1181.84	1254.86	1184.01	1253.08	1200.06	1253.08	1254.01	1251.26	1254.01	1254.53	1243.89	1254.53	1252.06	1206.243
3/24/2020	1242.55	1249.28	1250.33	1196.29	1249.28	1247.80	1153.74	1247.80	1255.52	1117.60	1255.52	1189.03											

Hydraulic Gradient - Daily Average Water Level Elevations - Observation and Recovery Wells

Figure 1a. Q1 2020 Water Levels

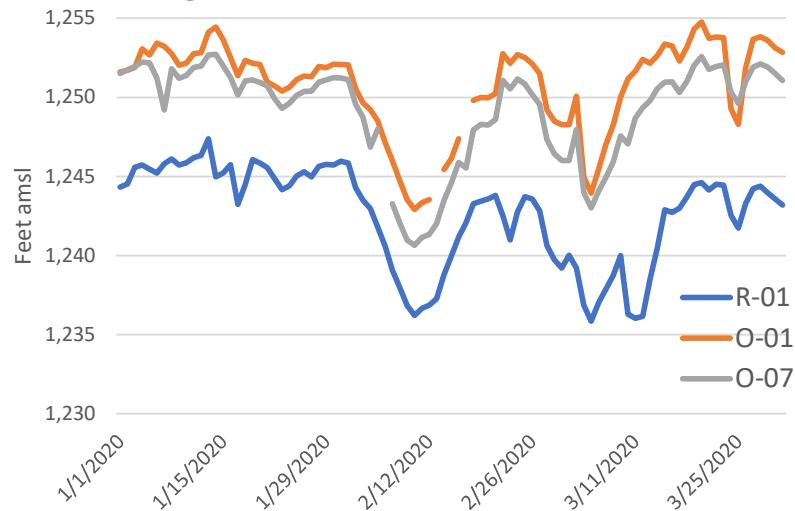


Figure 1b. Q1 2020 Water Levels

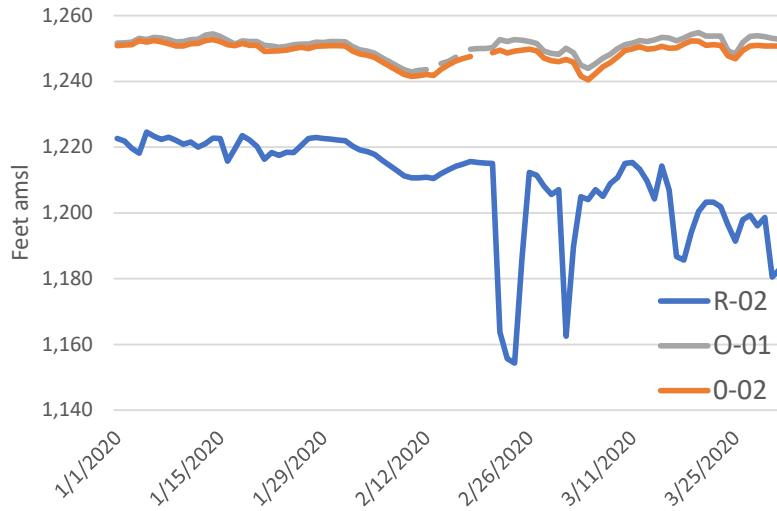


Figure 1c. Q1 2020 Water Levels

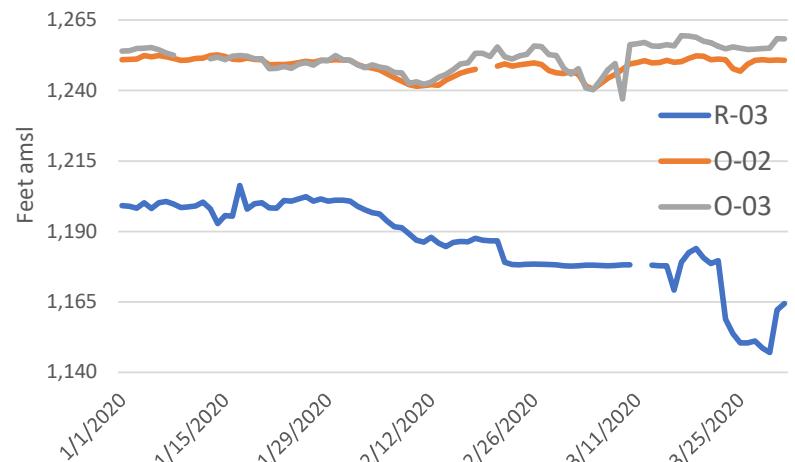


Figure 1d. Q1 2020 Water Levels



Hydraulic Gradient - Daily Average Water Level Elevations - Observation and Recovery Wells

Figure 1e. Q1 2020 Water Levels

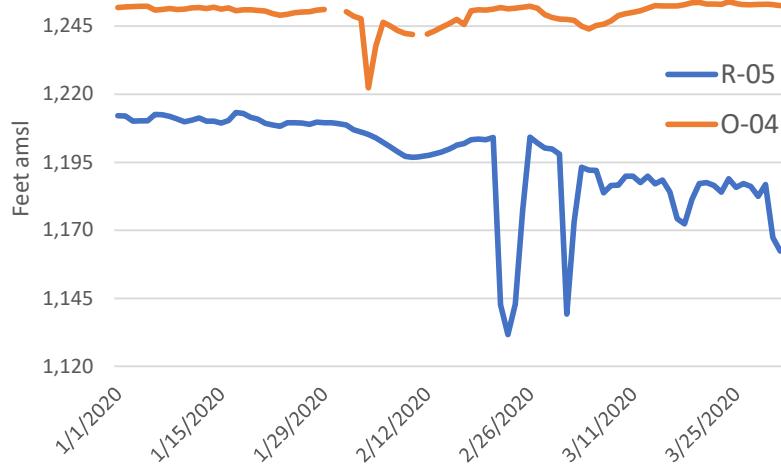


Figure 1f. Q1 2020 Water Levels

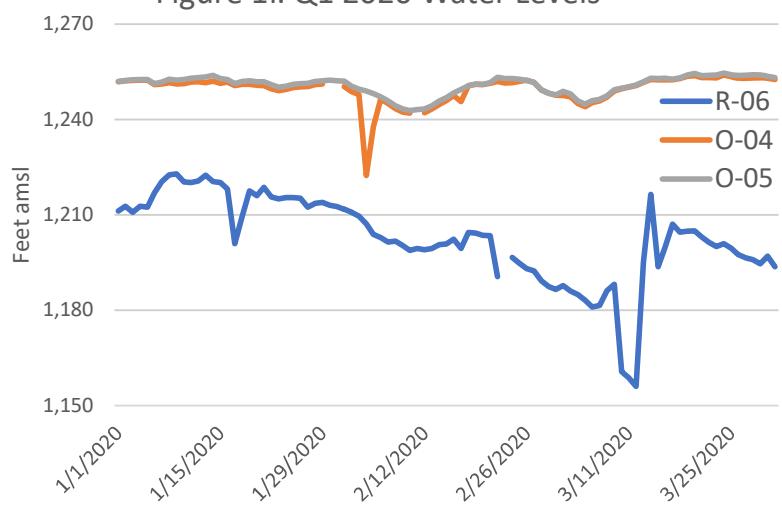


Figure 1g. Q1 2020 Water Levels

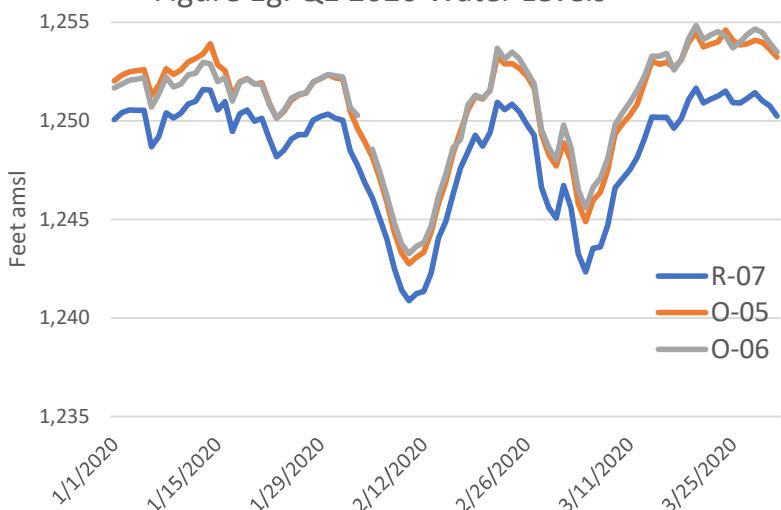


Figure 1h. Q1 2020 Water Levels



ATTACHMENT 4

Table and Graphs of Fluid Electrical Conductivity Measurements

Q1 2020 DAILY FLUID ELECTRICAL CONDUCTIVITY

Page 1 of 3

INJECTION AND OBSERVATION WELLS

FLORENCE COPPER INC.

FLORENCE, ARIZONA

Table 1. January 2020 Daily Fluid Electrical Conductivity Readings

Date	I-01	I-02	I-03	I-04	O-01	O-02	O-03	O-04	O-05	O-06	O-07
1/1/2020	73083	73172	73170	73102	4433	2923	12263	4236	1843	5939	4511
1/2/2020	71644	71676	71581	71521	4423	3752	11855	4725	1775	5629	4449
1/3/2020	75525	75363	75685	75547	4441	3341	11603	4786	1828	5365	4355
1/4/2020	72190	72068	72005	71992	3830	2693	10110	3127	1519	5267	3695
1/5/2020	71004	71329	71126	70849	4470	4118	11145	4523	1849	6040	4536
1/6/2020	71898	71814	71746	71672	4539	4859	11892	3838	1835	6133	4434
1/7/2020	72024	72069	72181	NA	4279	3343	11469	3909	1778	5862	4139
1/8/2020	74065	74303	74139	74227	4271	3419	11229	4085	1819	3527	4016
1/9/2020	61940	61946	62180	61936	4090	9094	NM	3809	1711	3390	3718
1/10/2020	62125	62818	62572	62505	4601	3382	NA	4555	1824	6602	4457
1/11/2020	61731	61353	61604	61666	4717	3768	NA	4565	1940	7236	4522
1/12/2020	62435	62445	62222	62173	4532	3496	NA	4833	1855	7270	4534
1/13/2020	59254	59228	58536	58618	4505	3424	NA	4153	1896	7268	4606
1/14/2020	61760	61864	NA	61497	4241	3326	NA	2228	1801	6795	4118
1/15/2020	57050	57058	NA	57113	4663	4928	NA	3018	2105	7772	4788
1/16/2020	60551	60513	NA	59718	4843	5418	NA	2299	2153	8471	5063
1/17/2020	56162	56298	56005	55867	4416	3870	NA	2463	1742	7415	4321
1/18/2020	60402	60742	60598	60307	4217	4742	NA	3031	1688	5680	3829
1/19/2020	54887	57113	56071	55965	4726	4350	NA	3792	1810	7018	4573
1/20/2020	59713	56633	60384	60398	4789	3921	NA	3527	1837	7233	4628
1/21/2020	52236	61903	62085	61842	4727	3701	NA	4224	1764	7823	4493
1/22/2020	59230	NA	59193	59410	4669	3788	8325	4501	1572	7841	4830
1/23/2020	60302	60253	60308	60105	4693	3381	8271	3180	1486	7604	4348
1/24/2020	59452	59559	59924	59374	3754	2531	8170	3212	1341	5360	3468
1/25/2020	61419	61448	61448	61540	5175	3435	8233	2607	1911	7490	4703
1/26/2020	56721	56769	56708	56291	4824	3286	8197	4277	1811	7249	4412
1/27/2020	61267	61264	61294	61409	4631	2946	8005	2458	1687	6910	4137
1/28/2020	59613	59638	59990	59688	4695	2948	8108	4516	1705	7403	4147
1/29/2020	58934	59036	59015	58193	4532	2838	8066	3570	1753	6920	4074
1/30/2020	51265	49933	49767	49178	4562	2833	8090	NA	1715	7145	3959
1/31/2020	49613	49601	19610	49541	4194	3012	7005	NA	1671	6492	3851

Notes:

All measurements in microsemens per centimeter (µS/cm)

NA or NM = Not measured or otherwise not available

January 7: I-04 No sample

January 9-21: O-03 down for downhole equipment retrieval, reconditioning

January 14-16: I-03 down for downhole equipment retrieval, reconditioning

January 22: I-02 No sample

January 30-31: O-04 down for reconditioning

INJECTION AND OBSERVATION WELLS

FLORENCE COPPER INC.

FLORENCE, ARIZONA

Table 2. February 2020 Daily Fluid Electrical Conductivity Readings

Date	I-01	I-02	I-03	I-04	O-01	O-02	O-03	O-04	O-05	O-06	O-07
2/1/2020	49321	49923	49752	49678	3577	2532	6032	5319	1382	5759	3240
2/2/2020	48531	48572	48621	48003	4624	3024	7427	7027	1789	7462	4192
2/3/2020	48086	48097	48100	47609	4777	3321	8173	7208	1875	7891	4331
2/4/2020	47835	47908	47833	47792	3826	2657	NA	6236	1500	NA	3402
2/5/2020	50073	50172	50132	50192	4453	3336	NA	7657	1869	5285	4048
2/6/2020	50631	50602	50543	50132	4741	3335	NA	7813	1926	6255	NA
2/7/2020	62322	62190	62340	61607	4781	3272	3590	7614	2081	6248	NA
2/8/2020	38128	36049	37954	37463	4761	3439	NA	7803	2034	6826	4428
2/9/2020	48841	48941	48142	48771	3726	2686	5994	6549	1602	5430	3460
2/10/2020	51442	51568	51176	51215	4081	3031	NA	7133	1722	6024	3791
2/11/2020	48775	48888	48799	48432	4230	3080	8513	NA	1703	6394	3897
2/12/2020	48151	48200	48198	47658	3379	2577	7601	5712	1409	5258	3214
2/13/2020	48863	48980	48701	48935	NA	3522	7290	7468	1834	7160	4217
2/14/2020	46213	46582	46654	46708	NA	3473	8483	7118	1830	7008	4004
2/15/2020	47704	47680	47713	47682	NA	3351	8444	6863	1808	6703	3883
2/16/2020	47897	47957	48091	48011	NA	3383	7486	6899	1763	6779	3917
2/17/2020	47089	47100	47115	47015	NA	3584	8318	6699	1868	7067	4088
2/18/2020	47400	47440	47383	47357	4680	3318	8379	6498	1792	6694	4794
2/19/2020	47438	47561	47608	47679	4651	NA	8390	6755	1846	6722	4028
2/20/2020	47651	47722	47675	47745	4392	NA	8496	6134	1936	6207	3839
2/21/2020	47806	47657	47838	47665	4586	NA	8370	6412	1923	6799	3973
2/22/2020	47923	47430	47402	48562	4985	4039	8609	6858	2071	7220	4289
2/23/2020	54132	54672	55122	54791	5061	4231	8982	7188	1930	6313	4316
2/24/2020	51477	51986	52111	51868	4893	5345	8766	6567	1619	3968	4309
2/25/2020	48266	48804	48867	48789	4887	5590	8624	7057	1725	3822	4264
2/26/2020	51322	51805	81795	51805	4562	5214	8591	6912	1753	3713	4045
2/27/2020	52617	53244	53206	53225	4895	5540	9239	7170	2022	3853	4298
2/28/2020	47718	48445	48253	48181	4912	4211	8712	7703	2029	3689	4332
2/29/2020	49797	50041	49662	49479	4793	4369	8800	7684	2092	3606	4203

Notes:

All measurements in microsemens per centimeter (uS/cm)

NA or NM = Not measured or otherwise not available

February 4: O-06 down for reconditioning

February 4-6: O-03 removal of submersible pump/installation of bladder pump

February 6-7: O-07 down for reconditioning

February 8: O-03 bladder pump out of service

February 10: O-03 bladder pump out of service

February 11: O-04 down for reconditioning

February 13-17: O-01 down for reconditioning

February 19-21: O-02 down for reconditioning

INJECTION AND OBSERVATION WELLS

FLORENCE COPPER INC.

FLORENCE, ARIZONA

Table 3. March 2020 Daily Fluid Electrical Conductivity Readings

Date	I-01	I-02	I-03	I-04	O-01	O-02	O-03	O-04	O-05	O-06	O-07
3/1/2020	49558	49687	49596	49560	4769	4245	8942	8000	2070	3687	4370
3/2/2020	49872	50125	50183	50445	4036	3582	9074	6858	1826	3225	3720
3/3/2020	47329	47592	47558	47519	3808	3331	9000	6537	1820	3112	3617
3/4/2020	51218	51152	51060	51172	4732	4417	8989	8384	2216	4092	4490
3/5/2020	50026	NA	50632	50607	5008	4374	8400	8897	2337	4162	4695
3/6/2020	49193	NA	49217	49305	4701	3865	8050	8280	2178	3882	4546
3/7/2020	48860	48730	48620	48786	4482	3887	NA	8221	2890	3901	4320
3/8/2020	49325	50541	49779	49835	4717	3666	NA	8210	2220	3715	4370
3/9/2020	52855	53287	53319	53205	4754	4112	6517	8197	2186	3789	4478
3/10/2020	49225	49810	49823	49676	4943	4485	6691	7978	2380	3919	4469
3/11/2020	47778	47903	48037	47884	4811	4983	6915	7857	2244	3832	4557
3/12/2020	51993	52813	52702	52692	4600	5102	6916	7862	2227	3799	4444
3/13/2020	47160	47368	47385	47242	4751	6130	7253	8000	2286	3941	4592
3/14/2020	49200	51212	51457	51077	4711	4998	6961	7798	2245	3842	4406
3/15/2020	47901	48422	48515	48517	4661	5871	7120	7967	2324	3916	4575
3/16/2020	48127	48853	48616	48665	4670	4510	7278	8210	2320	4084	4540
3/17/2020	48342	48263	48439	48332	4641	4438	7195	8066	2286	4019	4500
3/18/2020	48490	48982	48832	48764	4539	4012	7099	7590	2160	3991	4325
3/19/2020	48066	48113	47945	48354	4518	4400	7266	7904	2272	4040	4457
3/20/2020	51441	50598	50961	50926	4726	4746	7733	8484	2398	4277	4697
3/21/2020	48105	49145	49073	49155	4680	4255	7432	7979	2410	4202	4565
3/22/2020	49535	49865	49865	49844	4779	4322	7747	8550	2448	4283	4708
3/23/2020	47816	48336	48290	48399	4502	5015	6807	8021	2347	4087	4474
3/24/2020	47319	48041	47760	47789	4530	5925	6771	8041	2447	4111	4410
3/25/2020	71653	73049	72700	72274	4475	5921	6851	8331	2451	4110	4248
3/26/2020	71653	73049	72700	72274	4034	3607	6148	8189	2181	3823	3849
3/27/2020	72181	72987	72729	71915	4800	4244	6932	8723	2698	4680	4900
3/28/2020	73863	72817	73614	72442	4422	6720	6486	8033	2430	4427	4629
3/29/2020	70068	70569	70338	70569	4527	6961	6626	8206	2527	4582	4751
3/30/2020	70931	71692	71399	71320	4227	6826	6221	7719	2341	4271	4509
3/31/2020	71105	72090	72039	71977	4368	7471	6496	7783	2416	4400	4606

Notes:

All measurements in microsemens per centimeter (uS/cm)

NA or NM = Not measured or otherwise not available

March 5-6: I-02 down for reconditioning

March 7-8: O-03 down for bladder pump replacement

Figure 1. Daily Fluid Electrical Conductivity - Injection Wells

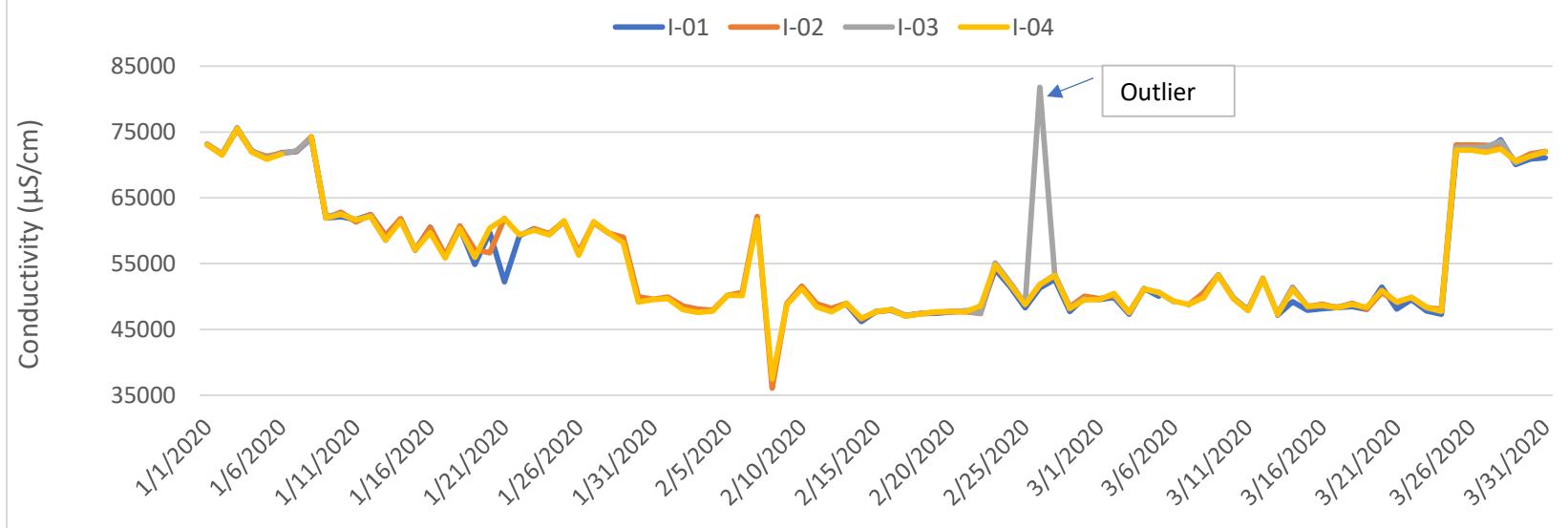
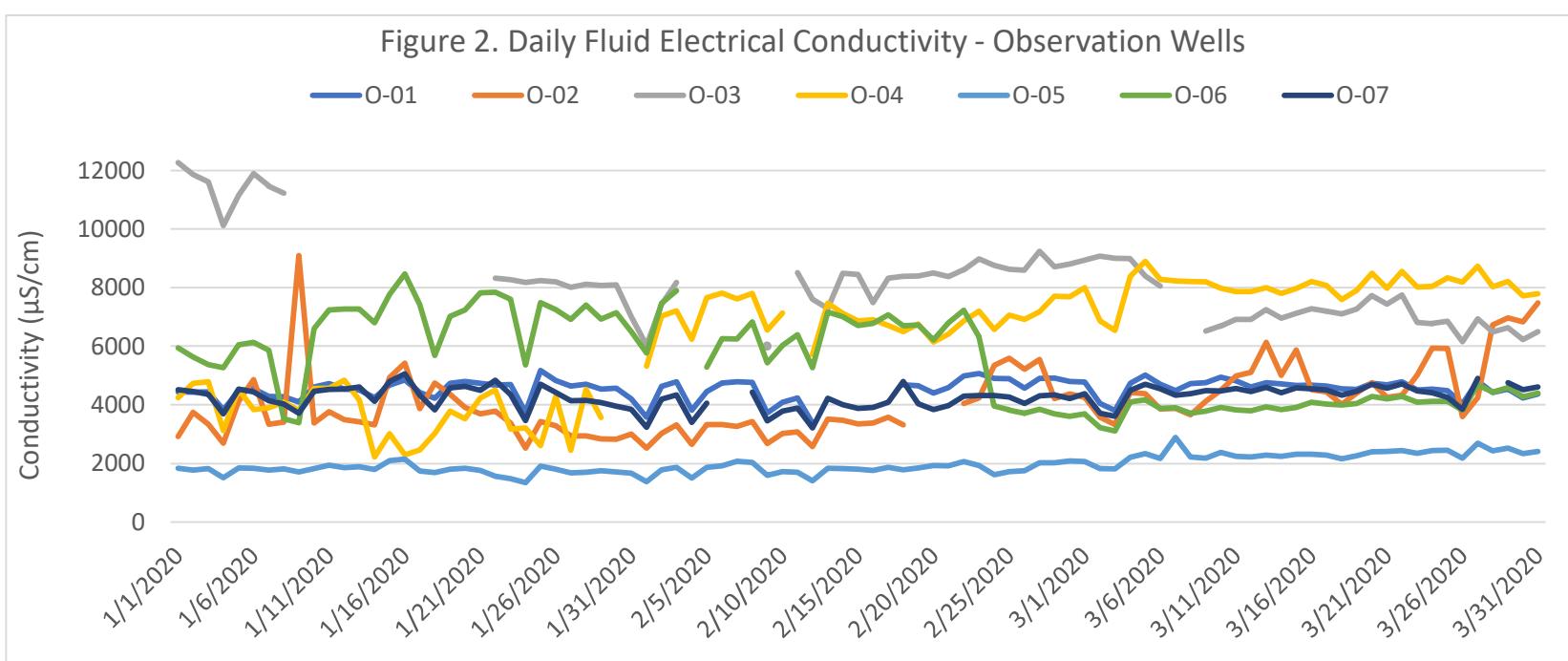


Figure 2. Daily Fluid Electrical Conductivity - Observation Wells



ATTACHMENT 5

Table and Graphs of Bulk Electrical Conductivity Measurements

MEMORANDUM

24 April 2020
File No. 132473-004

TO: Florence Copper Inc.
Mr. Brent Berg, General Manager

C: Florence Copper Inc.
Mr. Ian Ream, Senior Hydrogeologist

FROM: Haley & Aldrich, Inc.
Mark Nicholls, R.G.

SUBJECT: Summary of Bulk Electrical Conductivity Monitoring Results, First Quarter 2020
Production Test Facility
Florence Copper Inc., Florence, Arizona



Haley & Aldrich, Inc. (Haley & Aldrich) has conducted statistical analysis of bulk electrical conductivity (EC) data collected by HydroGeophysics, Inc. at the Florence Copper Inc. (Florence Copper) Production Test Facility (PTF) located in Florence, Arizona, in accordance with Temporary Aquifer Protection Permit (APP) No. P-106360 and the Underground Injection Control (UIC) Permit No R9UIC-AZ3-FR11-1. The procedures used to complete the analysis were described in the document titled *Procedures for Determining Bulk Electrical Conductivity Alert Levels* (Haley & Aldrich, 2018)¹.

Initially, the alert levels (AL) for bulk EC were approved in the letter issued by the U.S. Environmental Protection Agency dated 14 December 2018 and were adopted into the APP issued by the Arizona Department of Environmental Quality (ADEQ) on 5 December 2018 and renewed on 26 November 2019. More recently, ADEQ issued an amended APP on 13 February 2020 which updated the bulk EC ALs and the definition of a bulk EC exceedance, as requested in an “Other” permit amendment submitted by Florence Copper on 17 January 2020.

Alert Levels

To ensure that in-situ copper recovery fluids do not enter the Lower Basin Fill Unit (LBFU) from the Bedrock Oxide Unit, the three upper horizons (1 through 3) are monitored. The following ALs were established for these horizons:

¹ Haley & Aldrich, Inc., 2018. *Procedures for Determining Bulk Electrical Conductivity Alert Levels, Production Test Facility, Florence Copper Project*. August.

Electrode Pair Horizon	Alert Level Through 2/13/2020 (ohm-meters)	Alert Level Beginning 2/14/2020 (ohm-meters)
Horizon 1	9.93	9.67
Horizon 2	10.12	9.89
Horizon 3	10.33	10.07

The ALs represent minimum values. Consequently, an exceedance is indicated if the measured apparent resistivity on one of these horizons is *lower* than the established AL on three adjacent or intersecting current paths. It should be noted that prior to issuance of the amended APP, an apparent resistivity measurement below the AL in just one sensor pair on a single horizon constituted a bulk EC exceedance.

First Quarter 2020 Monitoring Results

First quarter (Q1) 2020 includes 26 monitoring events for bulk EC between 3 January and 29 March 2020. Monitoring events were conducted on a weekly basis and at more frequent intervals while AL exceedances confirmed during Q4 2019 persisted in the first 7 weeks of Q1 2020. During Q4 2019, AL exceedances were confirmed for the following five sensor pairs located on three monitoring horizons:

- Horizon 1, between wells O-05 and O-06;
- Horizon 1, between wells O-06 and O-07;
- Horizon 2, between wells O-05 to O-06;
- Horizon 3, between wells O-05 to O-06; and
- Horizon 3, between wells O-05 to O-07.

With a few exceptions, when bulk EC measurements rose above the ALs for sensor pairs on horizons 2 and 3, AL exceedances for the five sensor pairs listed above continued in Q1 2020 until the revised ALs were included in the amended APP issued 13 February 2020. Following the issuance of the amended APP, no bulk EC AL exceedances have occurred. Bulk EC monitoring maps for the monitoring period detail these results (Figures 1 through 26).

Data Summary

Tables 1 through 3 list the apparent resistivity results over this monitoring period for horizons 1 through 3, respectively.

Relative to the baseline dataset, measurements collected from horizon 3 on 19 and 25 March 2020 include outliers (defined as values over 4 times the interquartile range outside the range around the data median). The outlier measurements are biased high. The grouped data from each horizon generally fall within or slightly below the range of the baseline dataset (Attachment A).

Attachment B shows the data from each horizon over time, during the baseline period, and monitoring both before and after the PTF became operational. The data collected during Q1 2020 is within the established tolerance limits.

Variability in apparent resistivity values continues to correlate to precipitation events. However, as conditions dry out, apparent resistivities slowly trend back toward pre-event values. The low apparent resistivity values observed in November and December 2019 gradually recovered to levels observed before the rain events of November. The values continued to increase until the measurements were above the former ALs in early-February. February and March rain events subsequently depressed the values again; however, the measurements did not trigger an exceedance of the AL in the amended APP. Recent rains have resulted in apparent resistivities that fall below the AL at two electrode pairs on horizon 3 (O-05 to O-06, and O-05 to O-07), one electrode pair on horizon 2 (O-05 to O-06), and one electrode pair on horizon 1 (O-05 to O-06). As defined in the amended permit, the revised AL is exceeded if measurements fall below the AL on three or more adjacent or intersecting electrode pairs in the same horizon.

Enclosures:

- Table 1 – Bulk Electrical Conductivity Monitoring Results, Horizon 1 (40 Feet Above LBFU/Oxide Contact)
- Table 2 – Bulk Electrical Conductivity Monitoring Results, Horizon 2 (20 Feet Above LBFU/Oxide Contact)
- Table 3 – Bulk Electrical Conductivity Monitoring Results, Horizon 3 (at LBFU/Oxide Contact)
- Figure 1 – Apparent Bulk Resistivity Between Electrode Pairs by Horizon –1/3/2020, Production Test Facility
- Figure 2 – Apparent Bulk Resistivity Between Electrode Pairs by Horizon –1/9/2020, Production Test Facility
- Figure 3 – Apparent Bulk Resistivity Between Electrode Pairs by Horizon –1/10/2020, Production Test Facility
- Figure 4 – Apparent Bulk Resistivity Between Electrode Pairs by Horizon –1/11/2020, Production Test Facility
- Figure 5 – Apparent Bulk Resistivity Between Electrode Pairs by Horizon –1/14/2020, Production Test Facility
- Figure 6 – Apparent Bulk Resistivity Between Electrode Pairs by Horizon –1/15/2020, Production Test Facility
- Figure 7 – Apparent Bulk Resistivity Between Electrode Pairs by Horizon –1/16/2020, Production Test Facility
- Figure 8 – Apparent Bulk Resistivity Between Electrode Pairs by Horizon –1/21/2020, Production Test Facility
- Figure 9 – Apparent Bulk Resistivity Between Electrode Pairs by Horizon –1/22/2020, Production Test Facility
- Figure 10 – Apparent Bulk Resistivity Between Electrode Pairs by Horizon –1/23/2020, Production Test Facility

Figure 11 – Apparent Bulk Resistivity Between Electrode Pairs by Horizon –1/27/2020, Production Test Facility
Figure 12 – Apparent Bulk Resistivity Between Electrode Pairs by Horizon –1/28/2020, Production Test Facility
Figure 13 – Apparent Bulk Resistivity Between Electrode Pairs by Horizon –1/29/2020, Production Test Facility
Figure 14 – Apparent Bulk Resistivity Between Electrode Pairs by Horizon –2/4/2020, Production Test Facility
Figure 15 – Apparent Bulk Resistivity Between Electrode Pairs by Horizon –2/5/2020, Production Test Facility
Figure 16 – Apparent Bulk Resistivity Between Electrode Pairs by Horizon –2/6/2020, Production Test Facility
Figure 17 – Apparent Bulk Resistivity Between Electrode Pairs by Horizon –2/12/2020, Production Test Facility
Figure 18 – Apparent Bulk Resistivity Between Electrode Pairs by Horizon –2/13/2020, Production Test Facility
Figure 19 – Apparent Bulk Resistivity Between Electrode Pairs by Horizon –2/14/2020, Production Test Facility
Figure 20 – Apparent Bulk Resistivity Between Electrode Pairs by Horizon –2/18/2020, Production Test Facility
Figure 21 – Apparent Bulk Resistivity Between Electrode Pairs by Horizon –2/27/2020, Production Test Facility
Figure 22 – Apparent Bulk Resistivity Between Electrode Pairs by Horizon –3/5/2020, Production Test Facility
Figure 23 – Apparent Bulk Resistivity Between Electrode Pairs by Horizon –3/12/2020, Production Test Facility
Figure 24 – Apparent Bulk Resistivity Between Electrode Pairs by Horizon –3/19/2020, Production Test Facility
Figure 25 – Apparent Bulk Resistivity Between Electrode Pairs by Horizon –3/25/2020, Production Test Facility
Figure 26 – Apparent Bulk Resistivity Between Electrode Pairs by Horizon –3/29/2020, Production Test Facility
Attachment A – Box Diagrams for First Quarter Monitoring Data
Attachment B – Summary Plot of Bulk Electrical Conductivity

\\\haleyaldrich.com\share\phx_common\Projects\Florence Copper\133887 Quarterly Monitoring\Deliverables\1Q_2020 Reports\1Q_2020 Temp APP Report\Attachments\APP 4 UIC 5 Bulk EC\2020_0424_Bulk EC Summary Q12020_D2.docx

TABLES

TABLE 1
BULK ELECTRICAL CONDUCTIVITY MONITORING RESULTS
HORIZON 1 (40 FEET ABOVE LBFU/OXIDE CONTACT)
FLORENCE COPPER INC.
FLORENCE, ARIZONA

Electrode 1	Electrode 2	Sending Well	Receiving Well	Apparent Resistivity ($\Omega\text{-m}$)												
				1/3/2020	1/9/2020	1/10/2020	1/11/2020	1/14/2020	1/15/2020	1/16/2020	1/21/2020	1/22/2020	1/23/2020	1/27/2020	1/28/2020	1/29/2020
B-01-BC-01	B-02-BC-01	O-01	O-02	12.52	12.55	12.54	12.56	12.59	12.58	12.59	12.61	12.57	12.61	12.61	12.62	12.63
B-01-BC-01	B-03-BC1-02	O-01	O-03	10.84	10.89	10.86	10.94	10.97	10.99	10.99	11.01	10.96	11.02	11.03	11.07	11.04
B-01-BC-01	B-04-BC-01	O-01	O-04	12.77	12.86	12.84	12.88	12.98	12.95	12.98	13.00	12.97	13.01	13.03	13.08	13.00
B-01-BC-01	B-05-BC-01	O-01	O-05	11.80	11.88	11.87	11.90	11.98	11.95	11.99	12.00	11.97	12.01	12.01	12.05	12.02
B-01-BC-01	B-06-BC-01	O-01	O-06	11.34	11.40	11.39	11.44	11.50	11.49	11.48	11.50	11.48	11.51	11.52	11.54	11.53
B-01-BC-01	B-07-BC1-02	O-01	O-07	11.49	11.54	11.53	11.57	11.61	11.60	11.60	11.61	11.58	11.61	11.62	11.64	11.63
B-02-BC-01	B-03-BC1-02	O-02	O-03	10.06	10.09	10.06	10.13	10.18	10.17	10.18	10.19	10.17	10.20	10.21	10.24	10.21
B-02-BC-01	B-04-BC-01	O-02	O-04	13.34	13.43	13.41	13.48	13.56	13.53	13.55	13.59	13.56	13.61	13.63	13.68	13.61
B-02-BC-01	B-05-BC-01	O-02	O-05	12.93	13.03	13.02	13.07	13.11	13.10	13.14	13.17	13.13	13.17	13.20	13.25	13.21
B-02-BC-01	B-06-BC-01	O-02	O-06	12.93	12.98	12.96	13.04	13.09	13.10	13.05	13.12	13.09	13.12	13.16	13.20	13.17
B-02-BC-01	B-07-BC1-02	O-02	O-07	11.89	11.97	11.95	12.00	12.06	12.03	12.04	12.07	12.04	12.06	12.09	12.12	12.11
B-03-BC1-02	B-04-BC-01	O-03	O-04	12.09	12.13	12.09	12.18	12.22	12.20	12.20	12.26	12.25	12.24	12.27	12.29	12.24
B-03-BC1-02	B-05-BC-01	O-03	O-05	12.46	12.52	12.48	12.57	12.61	12.59	12.62	12.66	12.66	12.65	12.67	12.69	12.67
B-03-BC1-02	B-06-BC-01	O-03	O-06	13.46	13.51	13.49	13.57	13.65	13.67	13.66	13.71	13.70	13.68	13.71	13.76	13.73
B-03-BC1-02	B-07-BC1-02	O-03	O-07	12.71	12.78	12.75	12.83	12.92	12.93	12.90	12.95	12.94	12.92	12.95	13.00	12.98
B-04-BC-01	B-05-BC-01	O-04	O-05	10.57	10.58	10.58	10.60	10.61	10.59	10.62	10.63	10.63	10.63	10.63	10.65	10.62
B-04-BC-01	B-06-BC-01	O-04	O-06	11.69	11.74	11.72	11.77	11.82	11.79	11.81	11.84	11.85	11.83	11.85	11.88	11.85
B-04-BC-01	B-07-BC1-02	O-04	O-07	12.23	12.30	12.30	12.34	12.40	12.38	12.38	12.44	12.43	12.42	12.44	12.48	12.46
B-05-BC-01	B-06-BC-01	O-05	O-06	9.73	9.77	9.75	9.77	9.82	9.80	9.81	9.83	9.83	9.81	9.83	9.84	9.82
B-05-BC-01	B-07-BC1-02	O-05	O-07	10.38	10.45	10.44	10.48	10.53	10.52	10.52	10.55	10.54	10.53	10.55	10.58	10.56
B-06-BC-01	B-07-BC1-02	O-06	O-07	9.82	9.85	9.84	9.86	9.89	9.87	9.87	9.90	9.88	9.87	9.89	9.91	9.89

Notes

$\Omega\text{-m}$ = ohm-meters

LBFU = Lower Basin Fill Unit

Oxide = Bedrock Oxide Unit

Horizon 1 Alert Level through 2/13/2020 = 9.93 $\Omega\text{-m}$

Horizon 1 Alert Level beginning 2/14/2020 = 9.67 $\Omega\text{-m}$

Alert Level Exceedance

TABLE 1
BULK ELECTRICAL CONDUCTIVITY MONITORING RESULTS
HORIZON 1 (40 FEET ABOVE LBFU/OXIDE CONTACT)
FLORENCE COPPER INC.
FLORENCE, ARIZONA

Electrode 1	Electrode 2	Sending Well	Receiving Well	Apparent Resistivity ($\Omega\text{-m}$)												
				2/4/2020	2/5/2020	2/6/2020	2/12/2020	2/13/2020	2/14/2020	2/18/2020	2/27/2020	3/5/2020	3/12/2020	3/19/2020	3/25/2020	3/29/2020
B-01-BC-01	B-02-BC-01	O-01	O-02	12.65	12.66	12.65	12.48	12.62	12.57	12.63	12.55	12.56	12.49	12.50	12.43	12.38
B-01-BC-01	B-03-BC1-02	O-01	O-03	11.10	11.15	11.15	10.91	11.06	11.00	11.05	10.90	10.93	10.78	10.81	10.72	10.57
B-01-BC-01	B-04-BC-01	O-01	O-04	13.15	13.17	13.20	13.00	13.08	12.98	13.05	12.86	12.87	12.71	12.73	12.84	12.40
B-01-BC-01	B-05-BC-01	O-01	O-05	12.10	12.15	12.16	11.98	12.05	11.98	12.04	11.88	11.88	11.74	11.76	20.19	24.19
B-01-BC-01	B-06-BC-01	O-01	O-06	11.49	11.63	11.58	11.49	11.55	11.48	11.53	11.39	11.45	11.27	11.30	11.19	11.05
B-01-BC-01	B-07-BC1-02	O-01	O-07	11.61	11.69	11.66	11.58	11.64	11.59	11.63	11.53	11.56	11.47	11.48	11.39	11.29
B-02-BC-01	B-03-BC1-02	O-02	O-03	10.24	10.29	10.29	10.18	10.23	10.19	10.23	10.12	10.14	10.02	10.06	10.03	9.92
B-02-BC-01	B-04-BC-01	O-02	O-04	13.76	13.78	13.79	13.57	13.67	13.57	13.65	13.46	13.45	13.30	13.32	13.23	12.98
B-02-BC-01	B-05-BC-01	O-02	O-05	13.29	13.34	13.31	13.16	13.24	13.16	13.23	13.05	13.04	12.88	12.91	12.84	12.59
B-02-BC-01	B-06-BC-01	O-02	O-06	13.19	13.30	13.31	13.12	13.18	13.11	13.18	13.00	13.06	12.83	12.88	12.78	12.55
B-02-BC-01	B-07-BC1-02	O-02	O-07	12.15	12.21	12.20	12.04	12.11	12.05	12.10	11.95	11.97	11.86	11.78	11.61	
B-03-BC1-02	B-04-BC-01	O-03	O-04	12.38	12.37	12.37	12.24	12.28	12.23	12.29	12.14	12.14	12.01	12.07	12.00	11.82
B-03-BC1-02	B-05-BC-01	O-03	O-05	12.58	12.80	12.81	12.64	12.69	12.65	12.70	12.51	12.54	12.39	12.41	12.35	12.12
B-03-BC1-02	B-06-BC-01	O-03	O-06	13.76	13.87	13.87	13.69	13.74	13.69	13.74	13.55	13.63	13.38	13.42	13.32	13.06
B-03-BC1-02	B-07-BC1-02	O-03	O-07	13.05	13.16	13.12	12.92	12.97	12.93	12.97	12.78	12.81	12.68	12.68	12.60	12.38
B-04-BC-01	B-05-BC-01	O-04	O-05	10.62	10.69	10.67	10.61	10.63	10.60	10.63	10.58	10.57	10.51	10.82	10.75	10.42
B-04-BC-01	B-06-BC-01	O-04	O-06	11.85	11.96	11.97	11.83	11.87	11.82	11.87	11.75	11.79	11.59	11.63	11.57	11.38
B-04-BC-01	B-07-BC1-02	O-04	O-07	12.54	12.59	12.59	12.40	12.48	12.42	12.47	12.31	12.34	12.16	12.24	12.10	11.92
B-05-BC-01	B-06-BC-01	O-05	O-06	9.79	9.90	9.89	9.80	9.83	9.82	9.84	9.76	9.81	9.69	9.70	9.63	9.53
B-05-BC-01	B-07-BC1-02	O-05	O-07	10.61	10.65	10.64	10.51	10.57	10.53	10.56	10.44	10.50	10.36	10.36	10.28	10.11
B-06-BC-01	B-07-BC1-02	O-06	O-07	9.80	9.92	9.90	9.87	9.88	9.87	9.90	9.83	9.86	9.80	9.74	9.69	

Notes

$\Omega\text{-m}$ = ohm-meters

LBFU = Lower Basin Fill Unit

Oxide = Bedrock Oxide Unit

Horizon 1 Alert Level through 2/13/2020 = 9.93 $\Omega\text{-m}$

Horizon 1 Alert Level beginning 2/14/2020 = 9.67 $\Omega\text{-m}$

Alert Level Exceedance

TABLE 2

BULK ELECTRICAL CONDUCTIVITY MONITORING RESULTS

HORIZON 2 (20 FEET ABOVE LBFU/OXIDE CONTACT)

FLORENCE COPPER INC.

FLORENCE, ARIZONA

Electrode 1	Electrode 2	Sending Well	Receiving Well	Apparent Resistivity ($\Omega\text{-m}$)												
				1/3/2020	1/9/2020	1/10/2020	1/11/2020	1/14/2020	1/15/2020	1/16/2020	1/21/2020	1/22/2020	1/23/2020	1/27/2020	1/28/2020	1/29/2020
B-01-BC-02	B-02-BC-02	O-01	O-02	14.25	14.31	14.30	14.31	14.35	14.33	14.34	14.36	14.33	14.35	14.37	14.37	14.38
B-01-BC-02	B-03-BC1-04	O-01	O-03	10.95	10.99	10.96	11.05	11.11	11.08	11.10	11.12	11.07	11.13	11.14	11.17	11.15
B-01-BC-02	B-04-BC-02	O-01	O-04	12.72	12.81	12.80	12.83	12.91	12.86	12.88	12.93	12.89	12.95	12.96	13.02	12.96
B-01-BC-02	B-05-BC-02	O-01	O-05	11.70	11.78	11.77	11.81	11.87	11.85	11.85	11.89	11.85	11.90	11.91	11.96	11.92
B-01-BC-02	B-06-BC-02	O-01	O-06	11.24	11.31	11.29	11.34	11.39	11.39	11.38	11.40	11.37	11.41	11.42	11.46	11.44
B-01-BC-02	B-07-BC1-04	O-01	O-07	11.50	11.55	11.53	11.56	11.60	11.60	11.59	11.60	11.57	11.60	11.62	11.64	11.62
B-02-BC-02	B-03-BC1-04	O-02	O-03	10.73	10.73	10.68	10.81	10.85	10.82	10.84	10.87	10.81	10.87	10.88	10.87	10.88
B-02-BC-02	B-04-BC-02	O-02	O-04	13.46	13.56	13.52	13.62	13.67	13.60	13.66	13.70	13.64	13.71	13.75	13.79	13.74
B-02-BC-02	B-05-BC-02	O-02	O-05	13.01	13.10	13.08	13.14	13.20	13.19	13.19	13.23	13.19	13.24	13.27	13.32	13.27
B-02-BC-02	B-06-BC-02	O-02	O-06	12.96	13.05	13.02	13.10	13.17	13.16	13.16	13.19	13.13	13.19	13.21	13.26	13.23
B-02-BC-02	B-07-BC1-04	O-02	O-07	11.91	11.99	11.97	12.01	12.04	12.06	12.07	12.08	12.04	12.09	12.11	12.13	12.14
B-03-BC1-04	B-04-BC-02	O-03	O-04	12.08	12.11	12.06	12.18	12.22	12.21	12.22	12.25	12.25	12.25	12.27	12.30	12.25
B-03-BC1-04	B-05-BC-02	O-03	O-05	12.37	12.42	12.37	12.47	12.53	12.53	12.52	12.57	12.56	12.55	12.57	12.61	12.55
B-03-BC1-04	B-06-BC-02	O-03	O-06	13.37	13.44	13.39	13.51	13.59	13.55	13.58	13.61	13.60	13.58	13.63	13.67	13.66
B-03-BC1-04	B-07-BC1-04	O-03	O-07	12.54	12.59	12.53	12.65	12.74	12.72	12.72	12.75	12.72	12.74	12.76	12.81	12.81
B-04-BC-02	B-05-BC-02	O-04	O-05	10.92	10.94	10.93	10.94	10.97	10.96	10.97	10.98	10.98	10.97	10.99	11.00	10.97
B-04-BC-02	B-06-BC-02	O-04	O-06	11.68	11.74	11.71	11.77	11.81	11.79	11.76	11.84	11.84	11.83	11.84	11.88	11.84
B-04-BC-02	B-07-BC1-04	O-04	O-07	12.06	12.13	12.11	12.15	12.21	12.14	12.17	12.26	12.22	12.23	12.25	12.30	12.28
B-05-BC-02	B-06-BC-02	O-05	O-06	9.95	9.99	9.97	10.01	10.04	10.02	10.02	10.05	10.05	10.04	10.06	10.07	10.06
B-05-BC-02	B-07-BC1-04	O-05	O-07	10.25	10.33	10.30	10.33	10.37	10.35	10.35	10.40	10.38	10.39	10.40	10.43	10.42
B-06-BC-02	B-07-BC1-04	O-06	O-07	10.59	10.62	10.61	10.62	10.65	10.64	10.64	10.66	10.65	10.65	10.67	10.67	10.67

Notes

 $\Omega\text{-m}$ = ohm-meters

LBFU = Lower Basin Fill Unit

Oxide = Bedrock Oxide Unit

Horizon 2 Alert Level through 2/13/2020 = 10.12 $\Omega\text{-m}$ Horizon 2 Alert Level beginning 2/14/2020 = 9.89 $\Omega\text{-m}$

Alert Level Exceedance

TABLE 2
BULK ELECTRICAL CONDUCTIVITY MONITORING RESULTS
HORIZON 2 (20 FEET ABOVE LBFU/OXIDE CONTACT)
FLORENCE COPPER INC.
FLORENCE, ARIZONA

Electrode 1	Electrode 2	Sending Well	Receiving Well	Apparent Resistivity ($\Omega\text{-m}$)												
				2/4/2020	2/5/2020	2/6/2020	2/12/2020	2/13/2020	2/14/2020	2/18/2020	2/27/2020	3/5/2020	3/12/2020	3/19/2020	3/25/2020	3/29/2020
B-01-BC-02	B-02-BC-02	O-01	O-02	14.41	14.41	14.41	14.31	14.36	14.28	14.35	14.31	14.30	14.23	14.25	14.17	14.13
B-01-BC-02	B-03-BC1-04	O-01	O-03	11.14	11.27	11.27	11.10	11.17	11.09	11.16	11.03	11.02	10.89	10.93	10.81	10.67
B-01-BC-02	B-04-BC-02	O-01	O-04	13.07	13.12	13.13	12.93	13.00	12.90	13.02	12.83	12.80	12.65	12.70	12.54	12.34
B-01-BC-02	B-05-BC-02	O-01	O-05	11.97	12.07	12.06	11.88	11.95	11.86	11.94	11.79	11.77	11.65	11.67	11.60	11.45
B-01-BC-02	B-06-BC-02	O-01	O-06	11.48	11.52	11.51	11.39	11.43	11.37	11.44	11.32	11.33	11.18	11.22	11.09	10.96
B-01-BC-02	B-07-BC1-04	O-01	O-07	11.61	11.69	11.57	11.57	11.62	11.56	11.62	11.54	11.55	11.47	11.48	11.38	11.30
B-02-BC-02	B-03-BC1-04	O-02	O-03	10.87	10.95	10.96	10.85	10.90	10.84	10.90	10.79	10.79	10.69	10.74	10.67	10.56
B-02-BC-02	B-04-BC-02	O-02	O-04	13.87	13.91	13.91	13.68	13.77	13.71	13.77	13.55	13.54	13.40	13.44	13.34	13.10
B-02-BC-02	B-05-BC-02	O-02	O-05	13.32	13.44	13.44	13.23	13.31	13.23	13.28	13.08	13.08	12.94	12.98	12.90	12.66
B-02-BC-02	B-06-BC-02	O-02	O-06	13.30	13.36	13.38	13.17	13.25	13.17	13.22	13.03	13.09	12.90	12.92	12.83	12.60
B-02-BC-02	B-07-BC1-04	O-02	O-07	12.15	12.21	12.17	12.07	12.14	12.06	12.13	11.99	12.00	11.89	11.89	11.80	11.64
B-03-BC1-04	B-04-BC-02	O-03	O-04	12.37	12.38	12.39	12.24	12.28	12.24	12.29	12.13	12.13	12.01	12.10	11.99	11.84
B-03-BC1-04	B-05-BC-02	O-03	O-05	12.69	12.70	12.73	12.54	12.59	12.54	12.59	12.42	12.43	12.29	12.32	12.26	12.03
B-03-BC1-04	B-06-BC-02	O-03	O-06	13.72	13.77	13.81	13.60	13.66	13.58	13.66	13.45	13.52	13.30	13.33	13.24	12.98
B-03-BC1-04	B-07-BC1-04	O-03	O-07	12.85	12.91	12.84	12.73	12.80	12.73	12.80	12.60	12.66	12.50	12.61	12.54	12.23
B-04-BC-02	B-05-BC-02	O-04	O-05	11.02	11.03	11.04	10.96	11.00	10.99	10.99	10.94	10.92	10.87	10.88	11.16	10.77
B-04-BC-02	B-06-BC-02	O-04	O-06	11.91	11.95	11.97	11.80	11.86	11.81	11.86	11.74	11.78	11.58	11.64	11.56	11.38
B-04-BC-02	B-07-BC1-04	O-04	O-07	12.30	12.40	12.38	12.22	12.29	12.23	12.29	12.13	12.17	11.99	18.73	18.74	16.71
B-05-BC-02	B-06-BC-02	O-05	O-06	10.10	10.12	10.13	10.03	10.06	10.04	10.06	9.96	10.01	9.91	9.93	9.86	9.76
B-05-BC-02	B-07-BC1-04	O-05	O-07	10.46	10.50	10.45	10.37	10.43	10.38	10.41	10.29	10.34	10.22	10.22	10.50	9.99
B-06-BC-02	B-07-BC1-04	O-06	O-07	10.68	10.71	10.47	10.64	10.66	10.64	10.66	10.59	10.62	10.55	10.55	10.50	10.44

Notes

$\Omega\text{-m}$ = ohm-meters

LBFU = Lower Basin Fill Unit

Oxide = Bedrock Oxide Unit

Horizon 2 Alert Level through 2/13/2020 = 10.12 $\Omega\text{-m}$

Horizon 2 Alert Level beginning 2/14/2020 = 9.89 $\Omega\text{-m}$

Alert Level Exceedance

TABLE 3
BULK ELECTRICAL CONDUCTIVITY MONITORING RESULTS
HORIZON 3 (AT LBFU/OXIDE CONTACT)
FLORENCE COPPER INC.
FLORENCE, ARIZONA

Electrode 1	Electrode 2	Sending Well	Receiving Well	Apparent Resistivity ($\Omega\text{-m}$)												
				1/3/2020	1/9/2020	1/10/2020	1/11/2020	1/14/2020	1/15/2020	1/16/2020	1/21/2020	1/22/2020	1/23/2020	1/27/2020	1/28/2020	1/29/2020
B-01-BC-03	B-02-BC-03	O-01	O-02	15.11	15.14	15.14	15.16	15.21	15.19	15.19	15.22	15.17	15.19	15.23	15.24	15.23
B-01-BC-03	B-03-BC2-02	O-01	O-03	11.05	10.79	10.65	11.14	11.23	11.20	11.22	11.21	11.15	11.23	11.25	11.28	11.25
B-01-BC-03	B-04-BC-03	O-01	O-04	12.70	12.78	12.77	12.82	12.86	12.82	12.83	12.89	12.84	12.93	12.93	12.99	12.92
B-01-BC-03	B-05-BC-03	O-01	O-05	11.64	11.72	11.71	11.76	11.81	11.79	11.79	11.82	11.77	11.84	11.84	11.89	11.86
B-01-BC-03	B-06-BC-03	O-01	O-06	11.11	11.20	11.18	11.22	11.27	11.24	11.28	11.28	11.24	11.29	11.31	11.34	11.32
B-01-BC-03	B-07-BC2-02	O-01	O-07	11.75	11.81	11.79	11.82	11.87	11.82	11.86	11.85	11.81	11.86	11.88	11.89	11.89
B-02-BC-03	B-03-BC2-02	O-02	O-03	10.94	10.42	10.26	11.15	11.02	11.01	11.03	11.21	11.20	11.20	11.22	11.24	11.23
B-02-BC-03	B-04-BC-03	O-02	O-04	13.36	13.45	13.42	13.50	13.55	13.49	13.53	13.59	13.58	13.60	13.63	13.68	13.56
B-02-BC-03	B-05-BC-03	O-02	O-05	12.88	12.97	12.96	13.02	13.05	13.05	13.07	13.09	13.09	13.13	13.15	13.20	13.15
B-02-BC-03	B-06-BC-03	O-02	O-06	12.85	12.94	12.92	12.98	13.00	13.05	13.04	13.06	13.05	13.08	13.11	13.15	13.13
B-02-BC-03	B-07-BC2-02	O-02	O-07	12.02	12.09	12.07	12.10	12.18	12.23	12.17	12.18	12.15	12.20	12.21	12.24	12.24
B-03-BC2-02	B-04-BC-03	O-03	O-04	12.03	11.67	11.46	12.11	12.16	12.11	12.20	12.19	12.19	12.18	12.21	12.25	12.17
B-03-BC2-02	B-05-BC-03	O-03	O-05	12.44	12.13	11.95	12.46	12.62	12.57	12.61	12.55	12.54	12.56	12.57	12.61	12.57
B-03-BC2-02	B-06-BC-03	O-03	O-06	13.60	13.15	12.97	13.54	13.81	13.64	13.79	13.64	13.64	13.64	13.69	13.74	13.69
B-03-BC2-02	B-07-BC2-02	O-03	O-07	12.69	12.28	12.20	12.62	12.87	12.71	12.84	12.74	12.67	12.75	12.77	12.81	12.80
B-04-BC-03	B-05-BC-03	O-04	O-05	11.62	11.65	11.64	11.66	11.67	11.62	11.67	11.69	11.68	11.68	11.68	11.70	11.65
B-04-BC-03	B-06-BC-03	O-04	O-06	11.79	11.86	11.84	11.88	11.91	11.71	11.88	11.95	11.94	11.93	11.95	11.98	11.94
B-04-BC-03	B-07-BC2-02	O-04	O-07	11.97	12.03	12.03	12.05	12.11	12.06	12.07	12.16	12.10	12.13	12.16	12.20	12.19
B-05-BC-03	B-06-BC-03	O-05	O-06	10.22	10.27	10.26	10.28	10.31	10.30	10.30	10.32	10.32	10.31	10.32	10.34	10.32
B-05-BC-03	B-07-BC2-02	O-05	O-07	10.13	10.19	10.18	10.21	10.26	10.24	10.23	10.27	10.23	10.27	10.27	10.31	10.29
B-06-BC-03	B-07-BC2-02	O-06	O-07	10.79	10.82	10.83	10.82	10.85	10.85	10.86	10.86	10.85	10.86	10.86	10.88	10.86

Notes

$\Omega\text{-m}$ = ohm-meters

LBFU = Lower Basin Fill Unit

Oxide = Bedrock Oxide Unit

Horizon 3 Alert Level through 2/13/2020 = 10.33 $\Omega\text{-m}$

Horizon 3 Alert Level beginning 2/14/2020 = 10.07 $\Omega\text{-m}$

Alert Level Exceedance

TABLE 3
BULK ELECTRICAL CONDUCTIVITY MONITORING RESULTS
HORIZON 3 (AT LBFU/OXIDE CONTACT)
FLORENCE COPPER INC.
FLORENCE, ARIZONA

Electrode 1	Electrode 2	Sending Well	Receiving Well	Apparent Resistivity ($\Omega\text{-m}$)												
				2/4/2020	2/5/2020	2/6/2020	2/12/2020	2/13/2020	2/14/2020	2/18/2020	2/27/2020	3/5/2020	3/12/2020	3/19/2020	3/25/2020	3/29/2020
B-01-BC-03	B-02-BC-03	O-01	O-02	15.23	15.25	15.24	15.04	15.14	14.95	15.23	15.15	15.14	15.06	15.10	15.03	14.99
B-01-BC-03	B-03-BC2-02	O-01	O-03	11.33	11.36	11.36	11.17	11.25	11.12	11.26	11.12	11.11	10.98	11.03	10.91	10.77
B-01-BC-03	B-04-BC-03	O-01	O-04	13.03	13.08	13.09	12.87	12.97	12.82	12.97	12.79	12.76	12.63	12.69	12.54	12.33
B-01-BC-03	B-05-BC-03	O-01	O-05	11.90	11.99	11.99	11.80	11.88	11.74	11.88	11.73	11.70	11.59	11.63	11.48	11.31
B-01-BC-03	B-06-BC-03	O-01	O-06	11.35	11.40	11.38	11.22	11.32	11.18	11.32	11.19	11.18	11.07	11.11	11.00	10.84
B-01-BC-03	B-07-BC2-02	O-01	O-07	11.88	11.95	11.88	11.75	11.85	11.72	11.86	11.80	11.78	11.73	11.73	11.65	11.56
B-02-BC-03	B-03-BC2-02	O-02	O-03	11.29	11.30	11.31	11.19	11.24	11.19	11.23	11.13	11.11	11.03	11.17	11.01	10.89
B-02-BC-03	B-04-BC-03	O-02	O-04	13.75	13.80	13.81	13.57	13.67	13.59	13.66	13.47	13.41	13.30	13.38	13.24	13.00
B-02-BC-03	B-05-BC-03	O-02	O-05	13.21	13.30	13.35	13.12	13.18	13.09	13.16	12.97	12.96	12.82	12.87	12.76	12.53
B-02-BC-03	B-06-BC-03	O-02	O-06	13.15	13.25	13.26	13.07	13.13	13.05	13.12	12.95	12.92	12.79	12.83	12.73	12.50
B-02-BC-03	B-07-BC2-02	O-02	O-07	12.25	12.31	12.30	12.17	12.24	12.14	12.22	12.10	12.09	11.98	12.00	11.89	11.73
B-03-BC2-02	B-04-BC-03	O-03	O-04	12.28	12.32	12.34	12.18	12.23	12.20	12.23	12.10	12.07	11.94	12.27	12.33	11.85
B-03-BC2-02	B-05-BC-03	O-03	O-05	12.65	12.71	12.72	12.54	12.60	12.54	12.60	12.43	12.44	12.28	12.33	12.26	12.03
B-03-BC2-02	B-06-BC-03	O-03	O-06	13.76	13.83	13.84	13.65	13.71	13.64	13.71	13.53	13.52	13.31	13.38	13.26	13.03
B-03-BC2-02	B-07-BC2-02	O-03	O-07	12.87	12.91	12.92	12.73	12.80	12.72	12.79	12.64	12.66	12.47	13.10	13.11	12.68
B-04-BC-03	B-05-BC-03	O-04	O-05	11.72	11.74	11.74	11.66	11.69	11.67	11.68	11.62	11.62	11.55	11.56	11.53	11.46
B-04-BC-03	B-06-BC-03	O-04	O-06	12.01	12.06	12.07	11.91	11.97	11.93	11.99	11.84	11.86	11.70	11.75	11.66	11.50
B-04-BC-03	B-07-BC2-02	O-04	O-07	12.18	12.29	12.30	12.13	12.18	12.13	12.17	12.01	12.06	11.89	29.34	27.30	22.86
B-05-BC-03	B-06-BC-03	O-05	O-06	10.35	10.39	10.39	10.30	10.33	10.31	10.33	10.25	10.27	10.19	10.20	10.13	10.03
B-05-BC-03	B-07-BC2-02	O-05	O-07	10.32	10.38	10.36	10.25	10.30	10.26	10.30	10.18	10.22	10.11	10.12	10.04	9.86
B-06-BC-03	B-07-BC2-02	O-06	O-07	10.88	10.94	10.82	10.84	10.86	10.84	10.88	10.81	10.84	10.77	10.76	10.70	10.65

Notes

$\Omega\text{-m}$ = ohm-meters

LBFU = Lower Basin Fill Unit

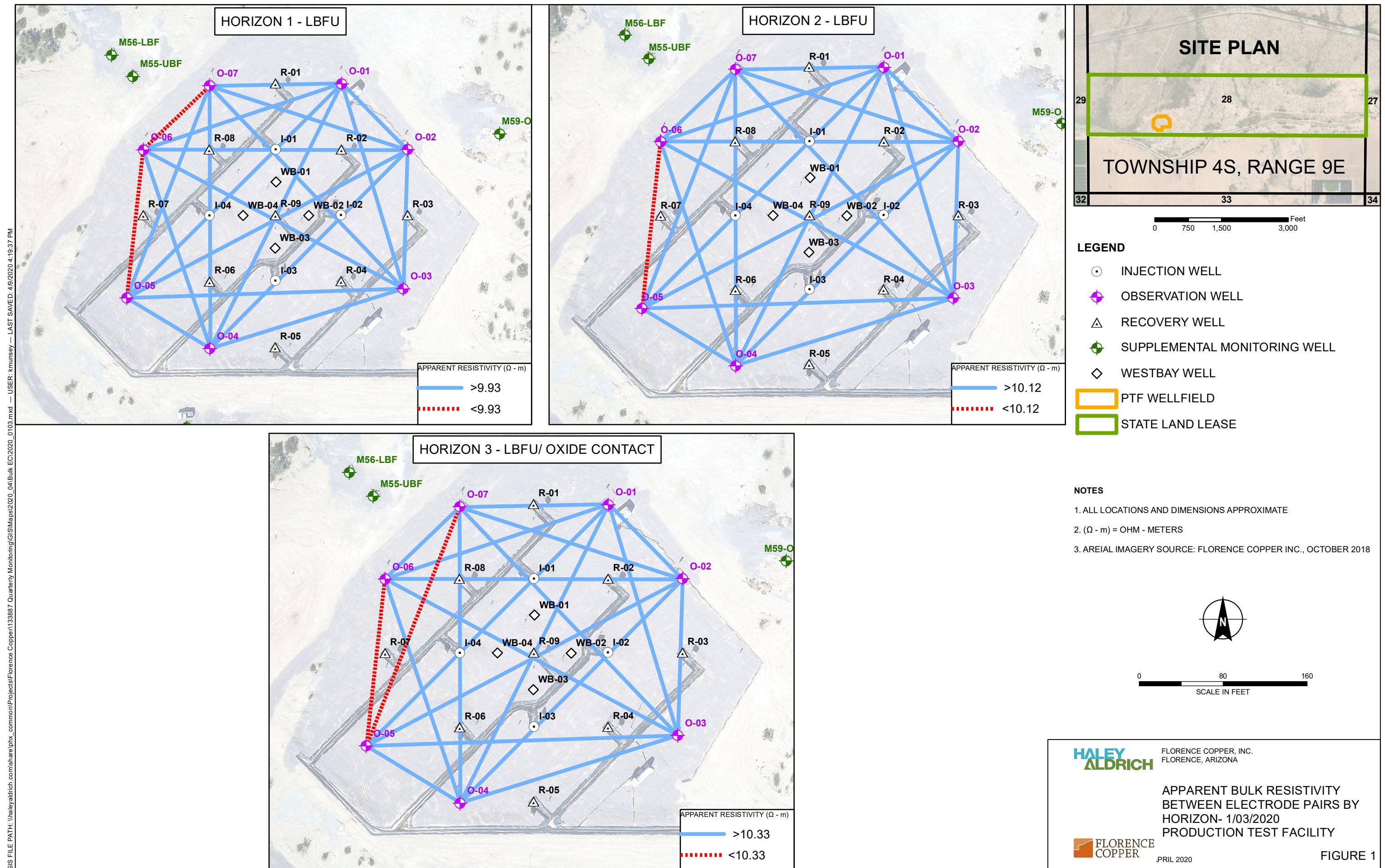
Oxide = Bedrock Oxide Unit

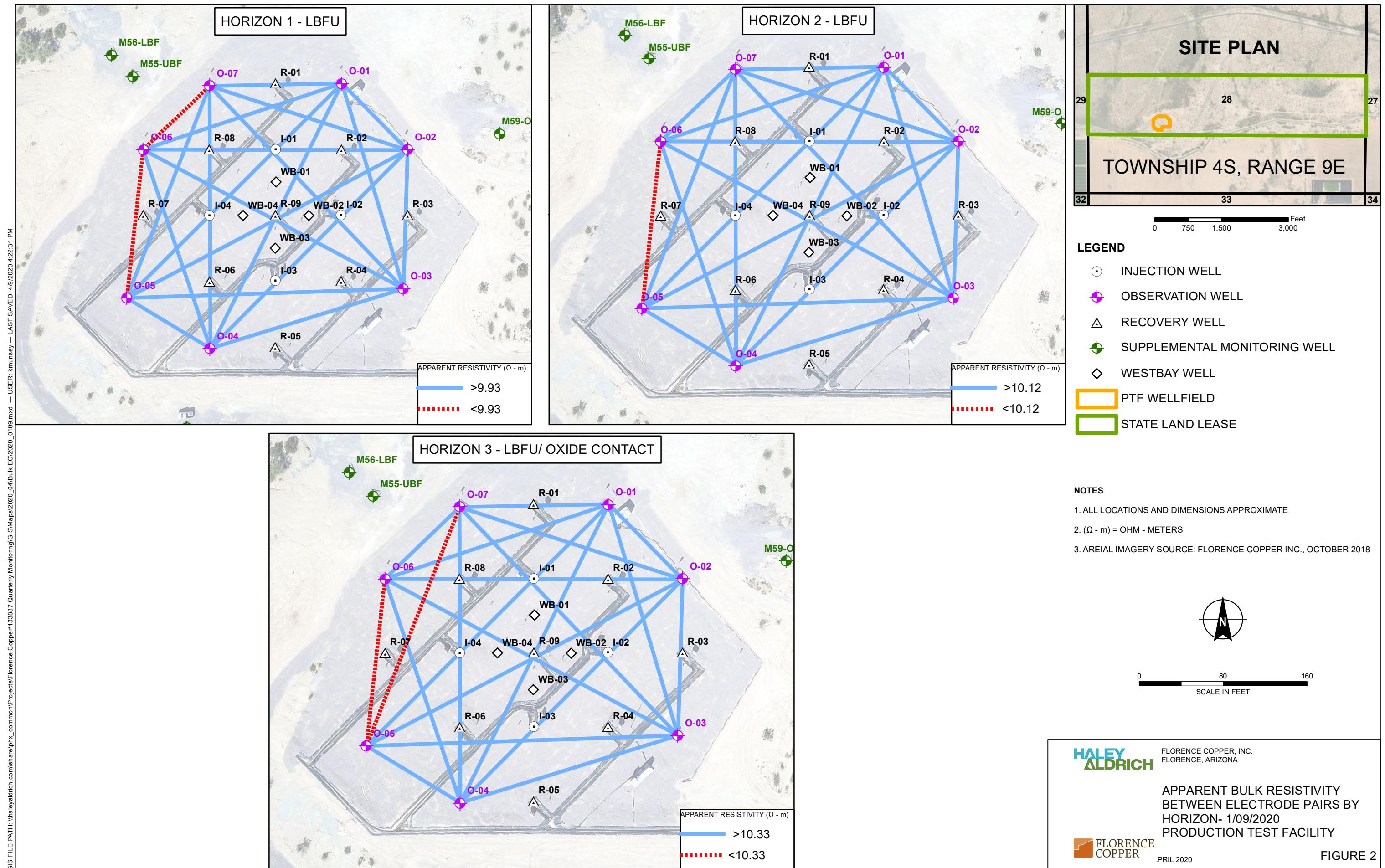
Horizon 3 Alert Level through 2/13/2020 = 10.33 $\Omega\text{-m}$

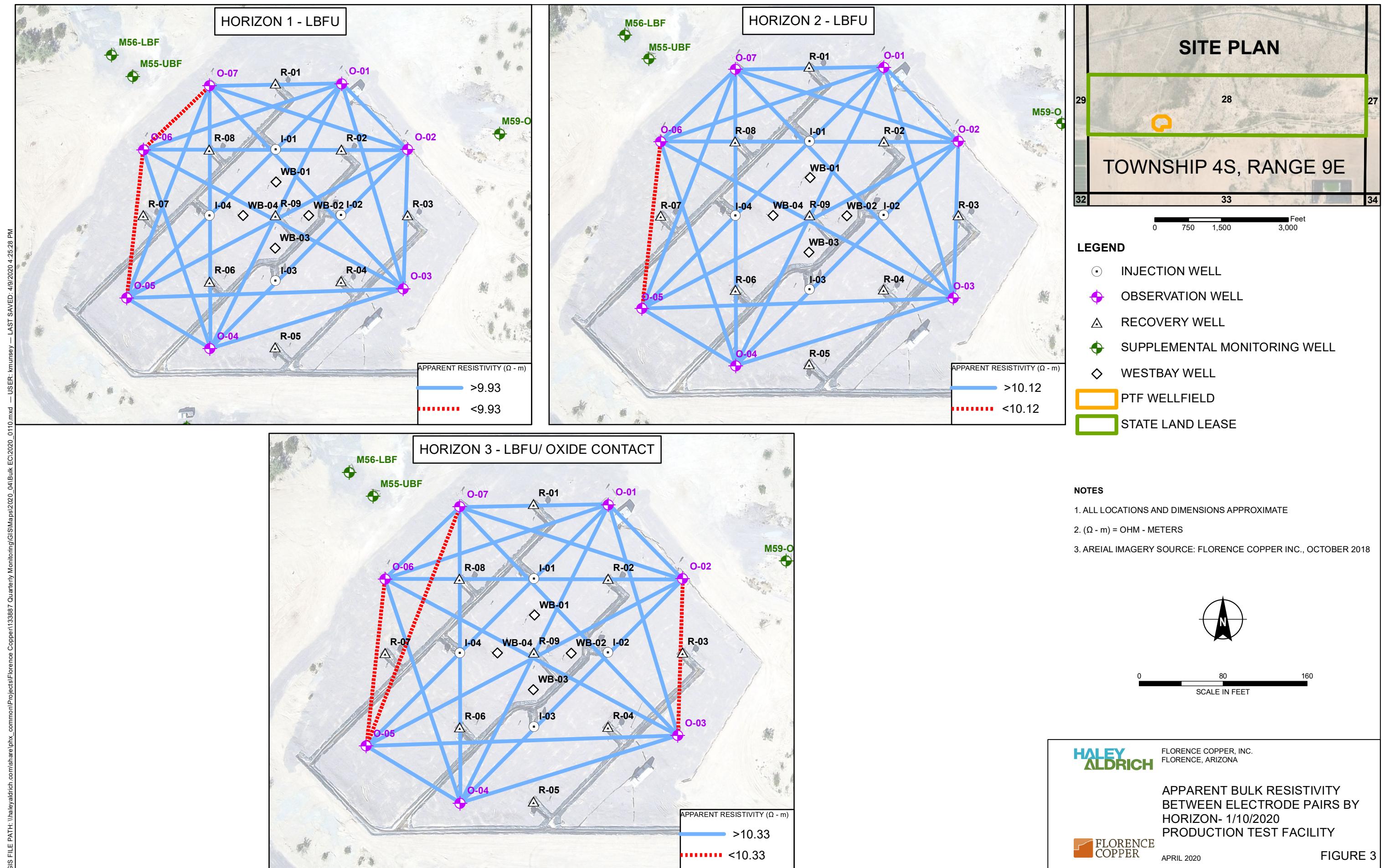
Horizon 3 Alert Level beginning 2/14/2020 = 10.07 $\Omega\text{-m}$

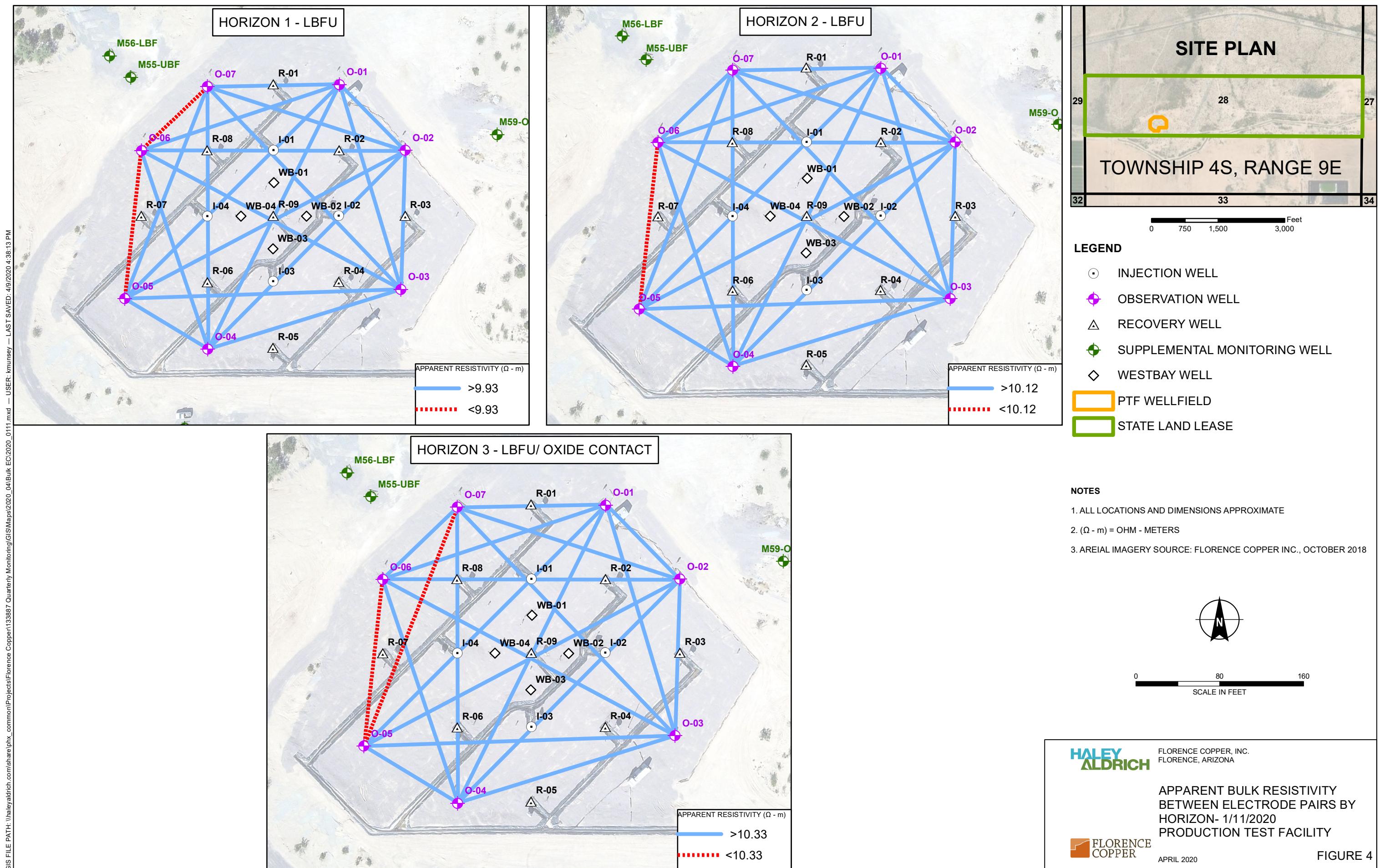
Alert Level Exceedance

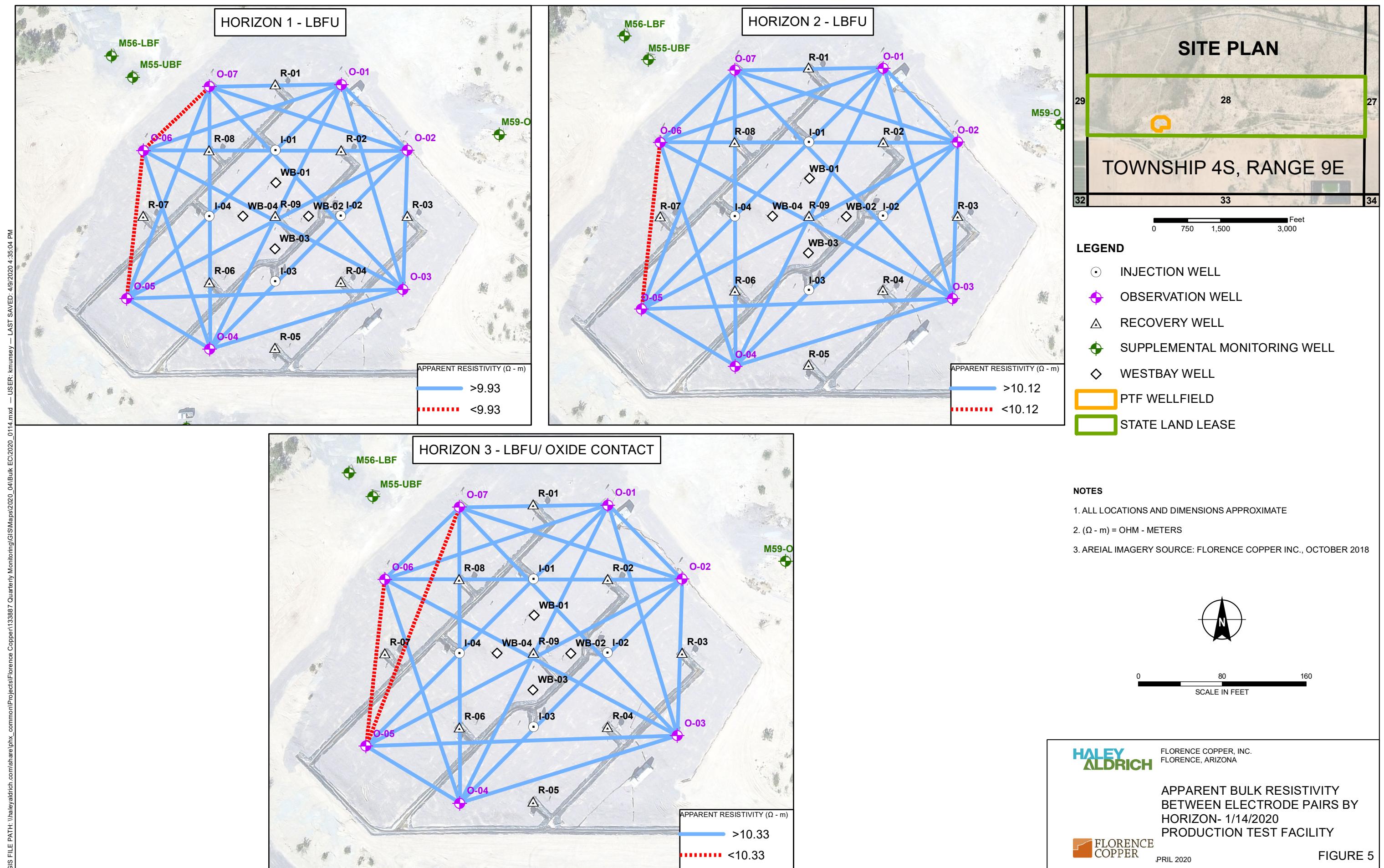
FIGURES

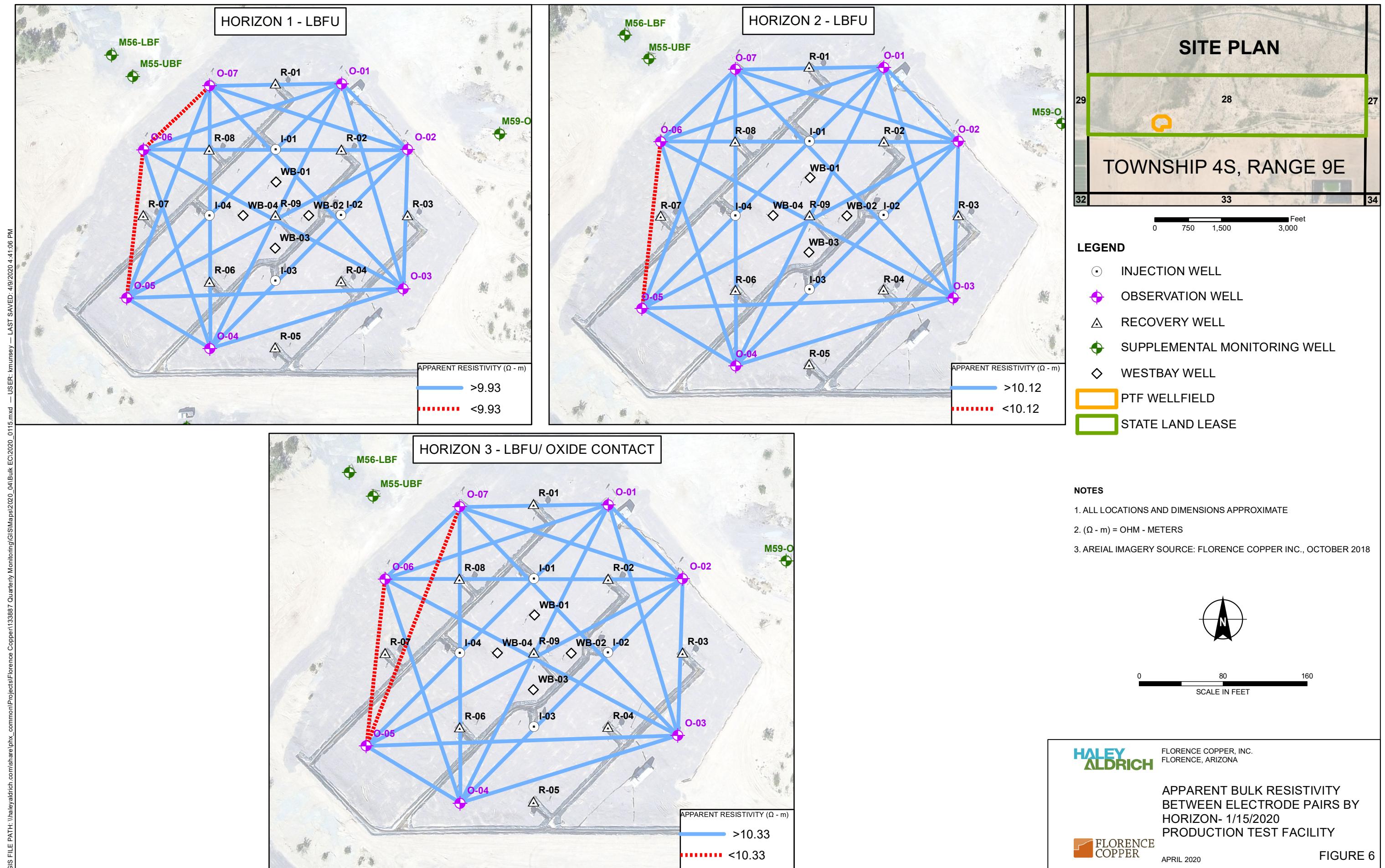


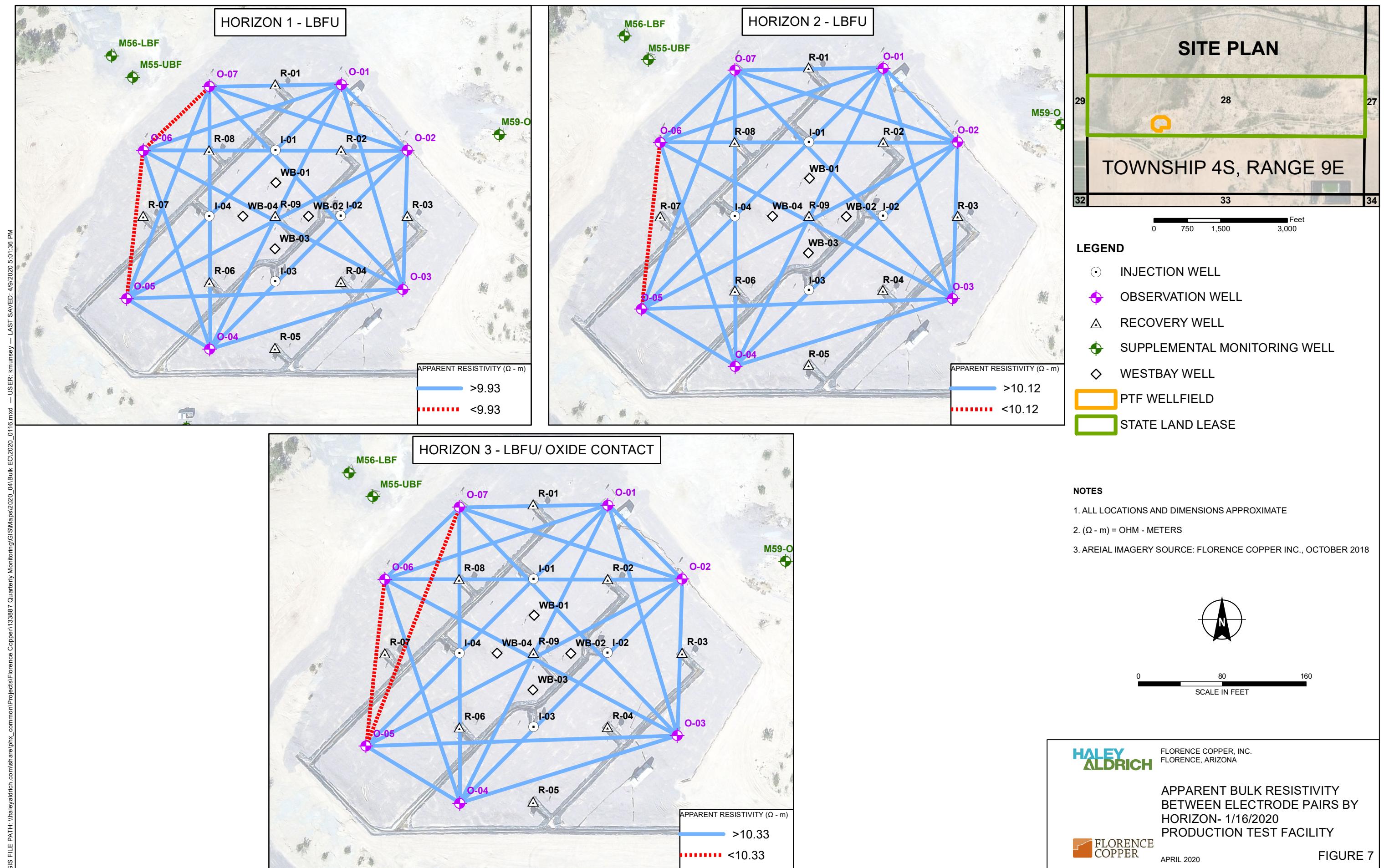


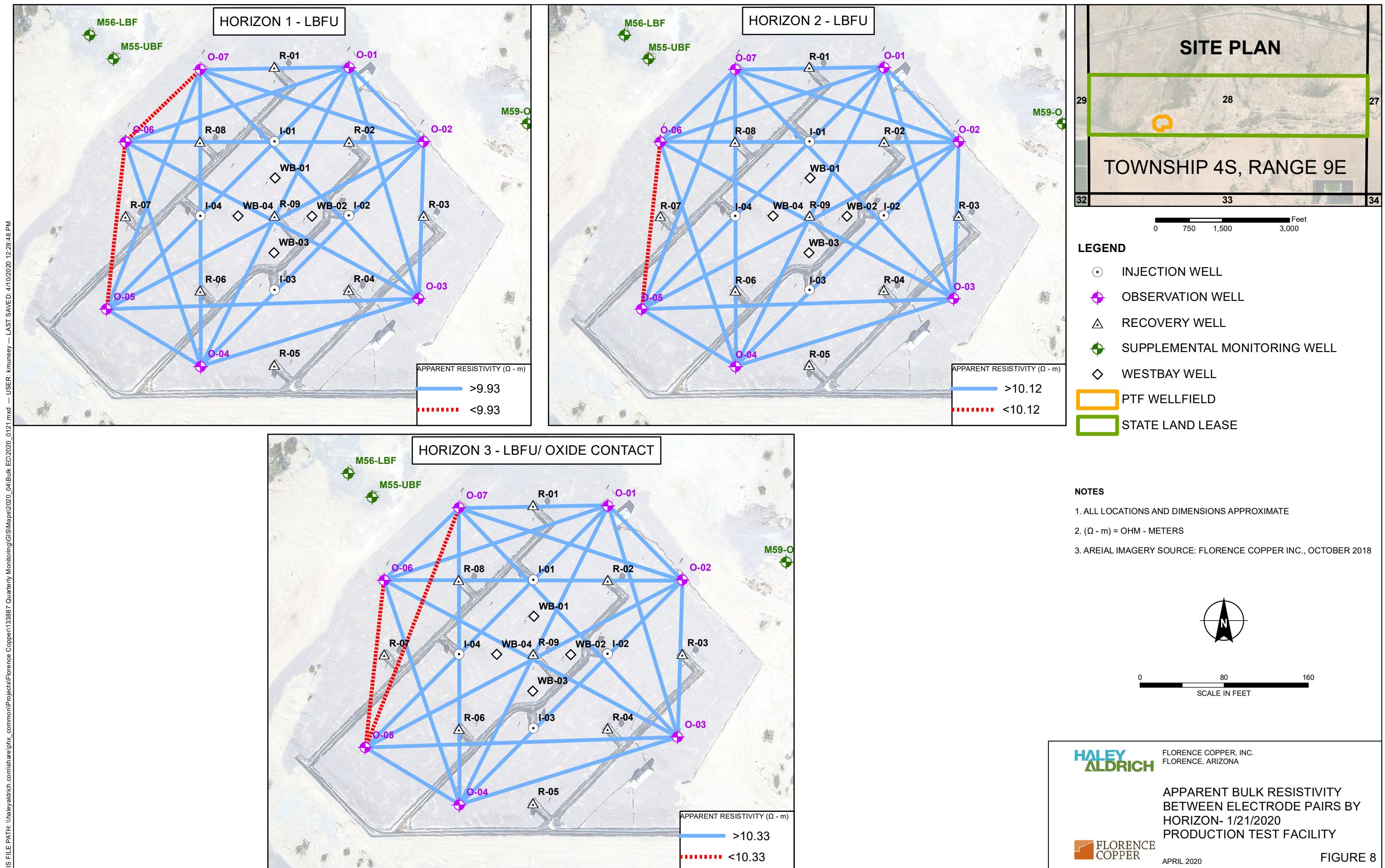


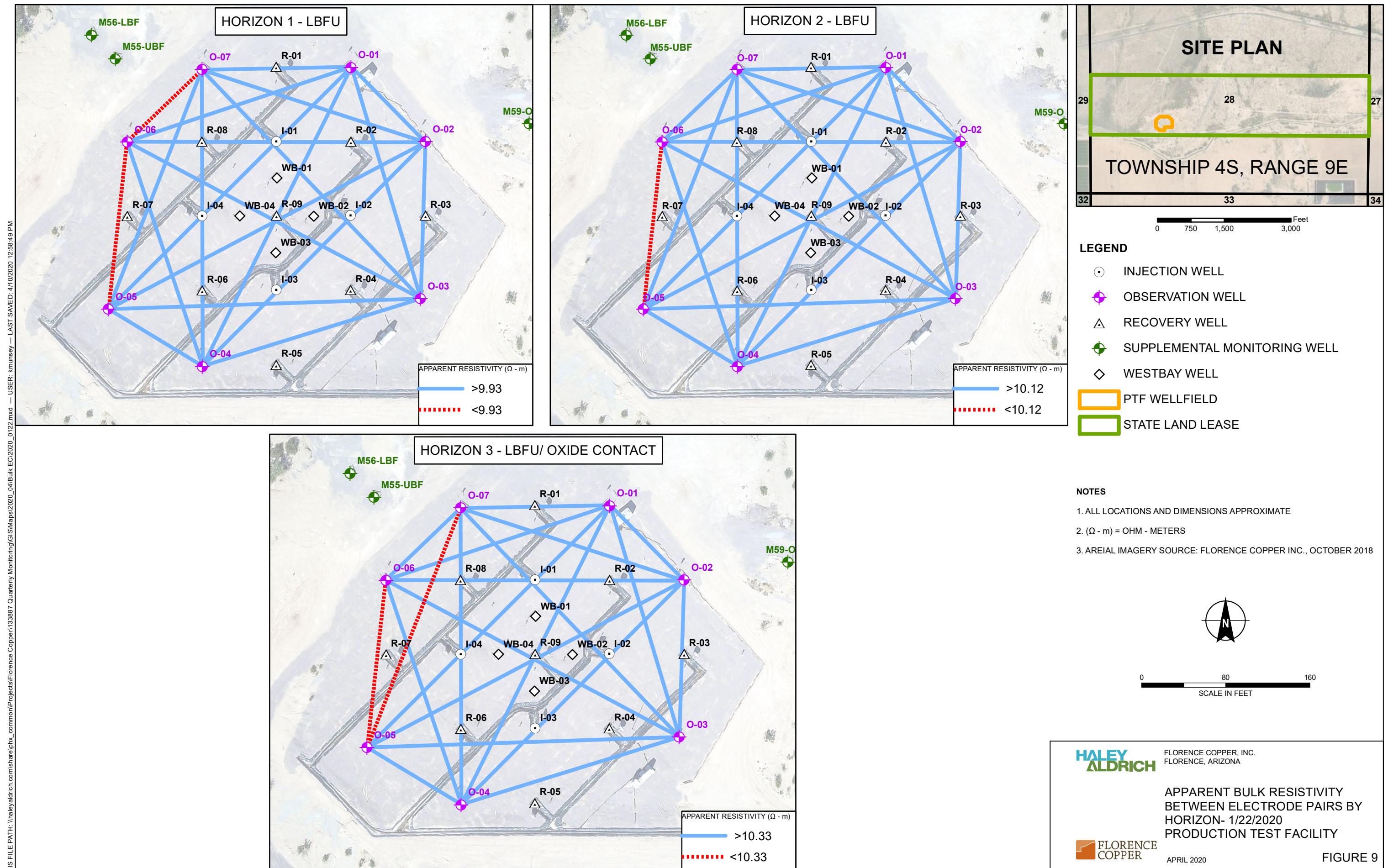


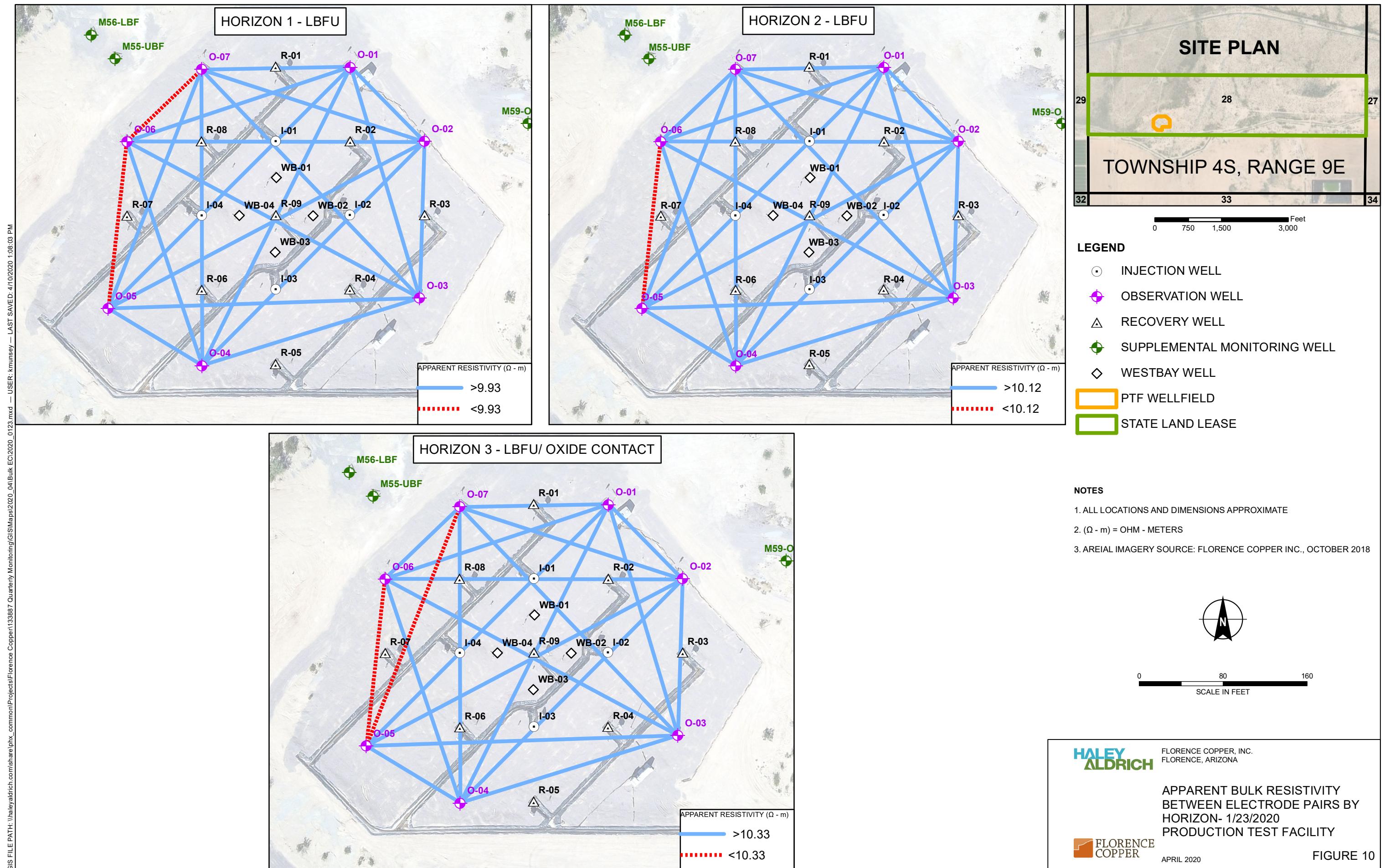


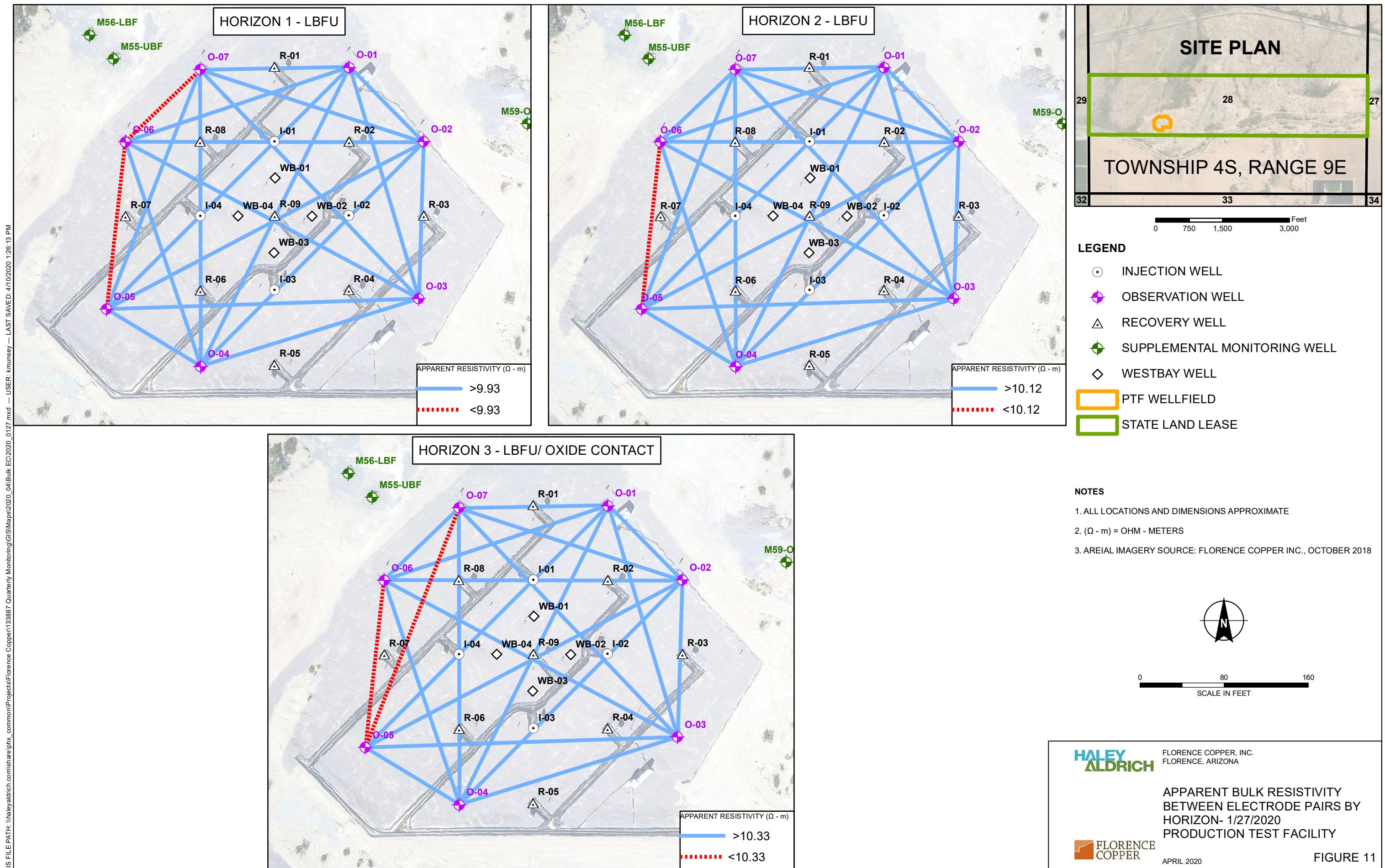


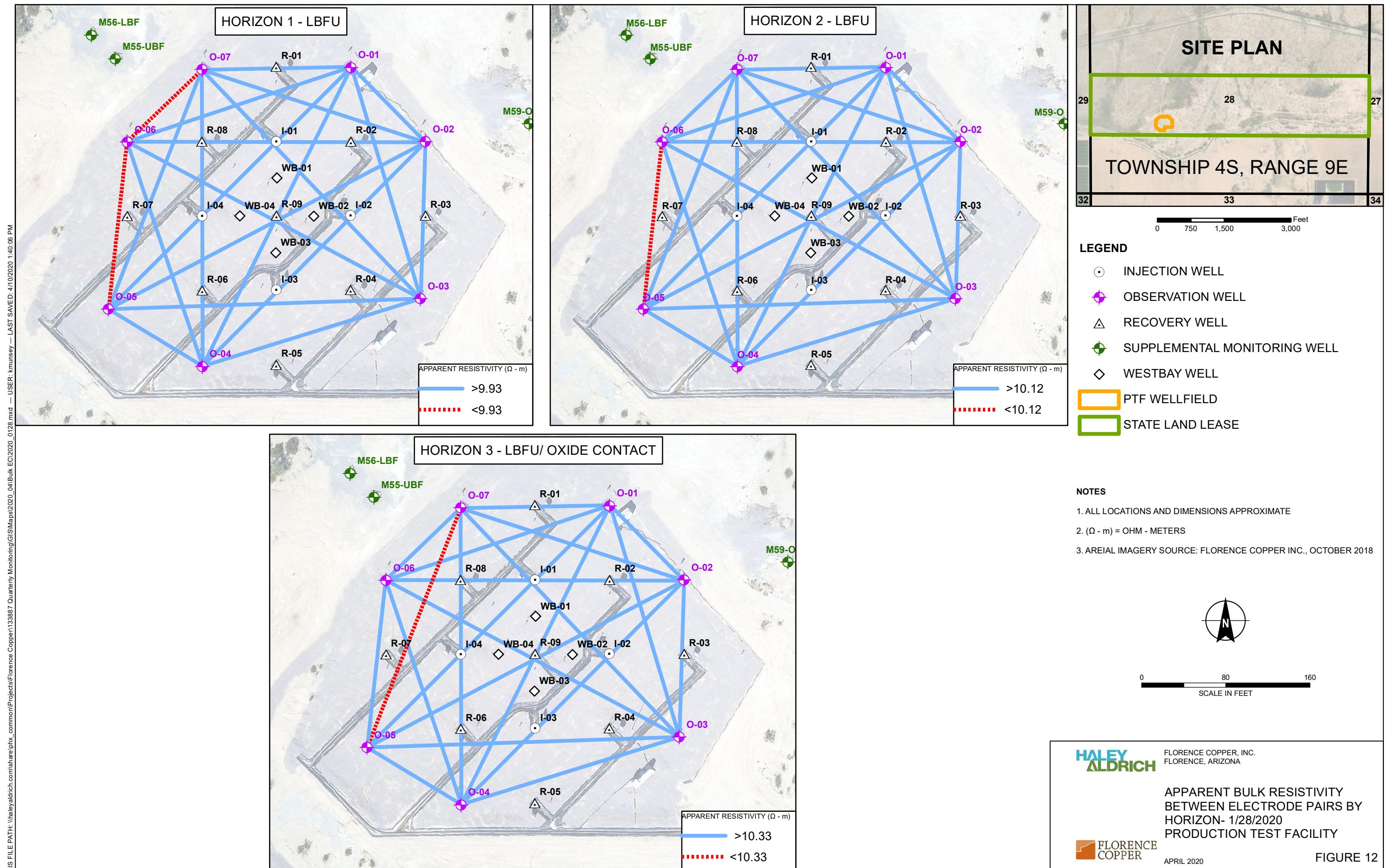


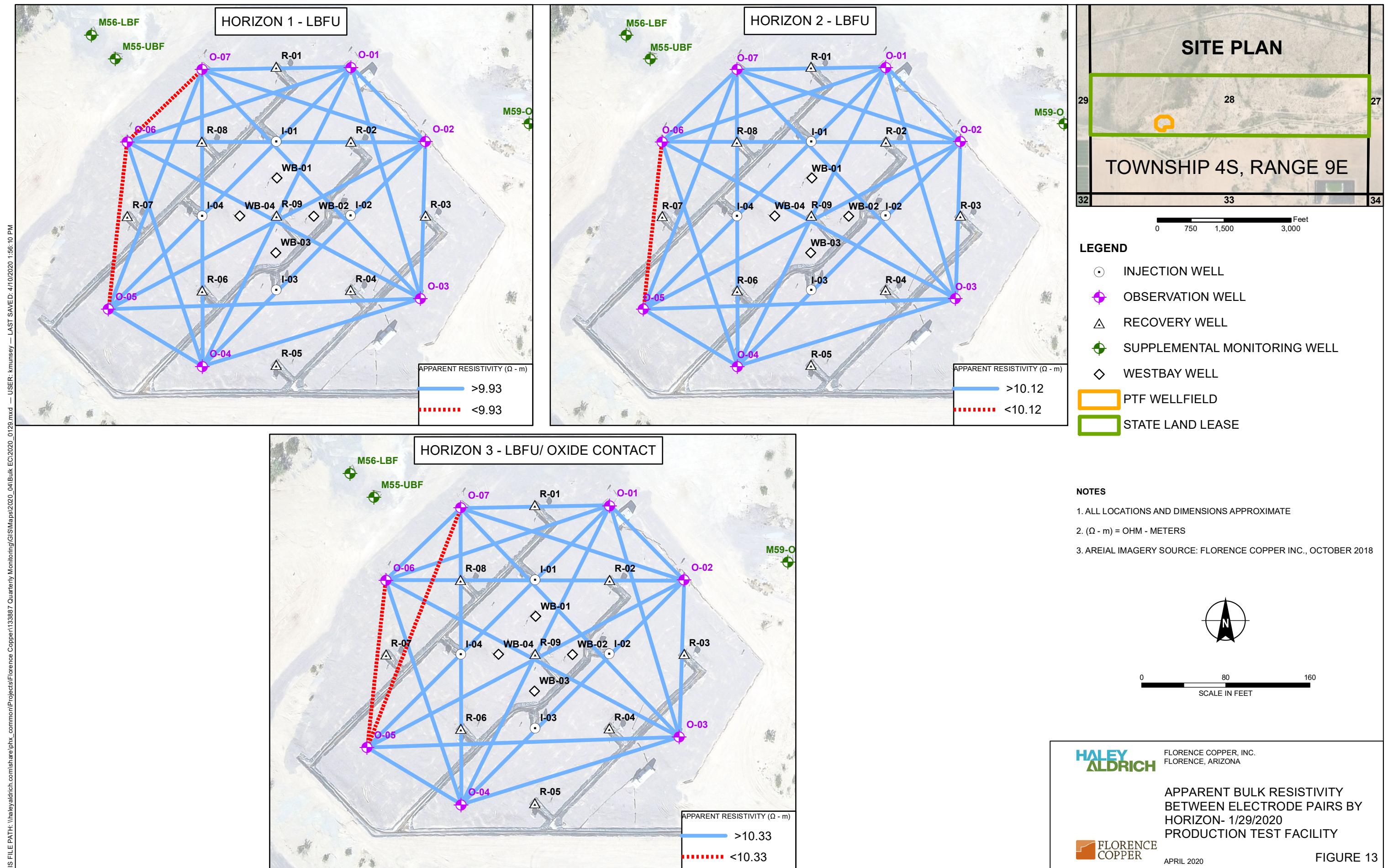


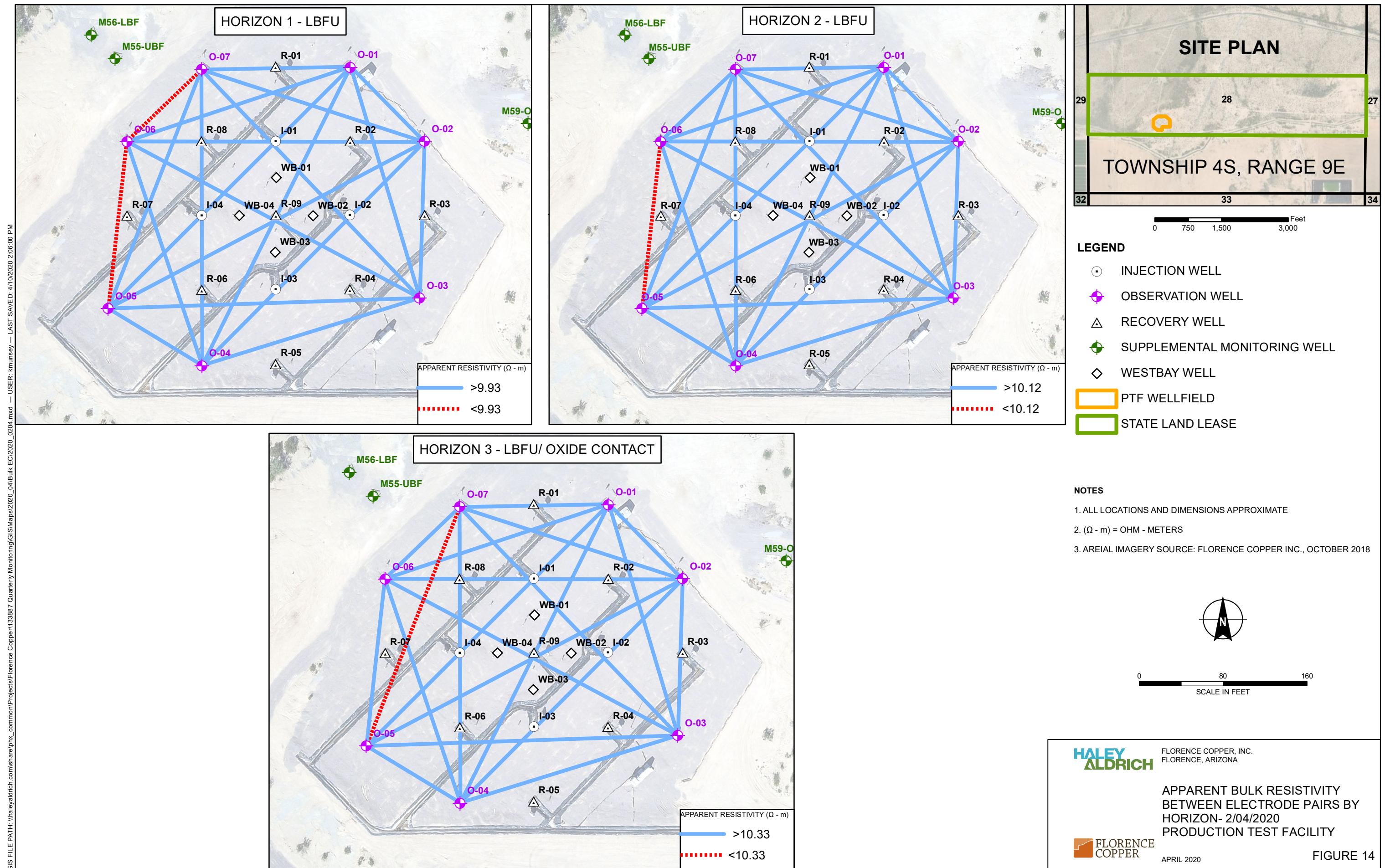


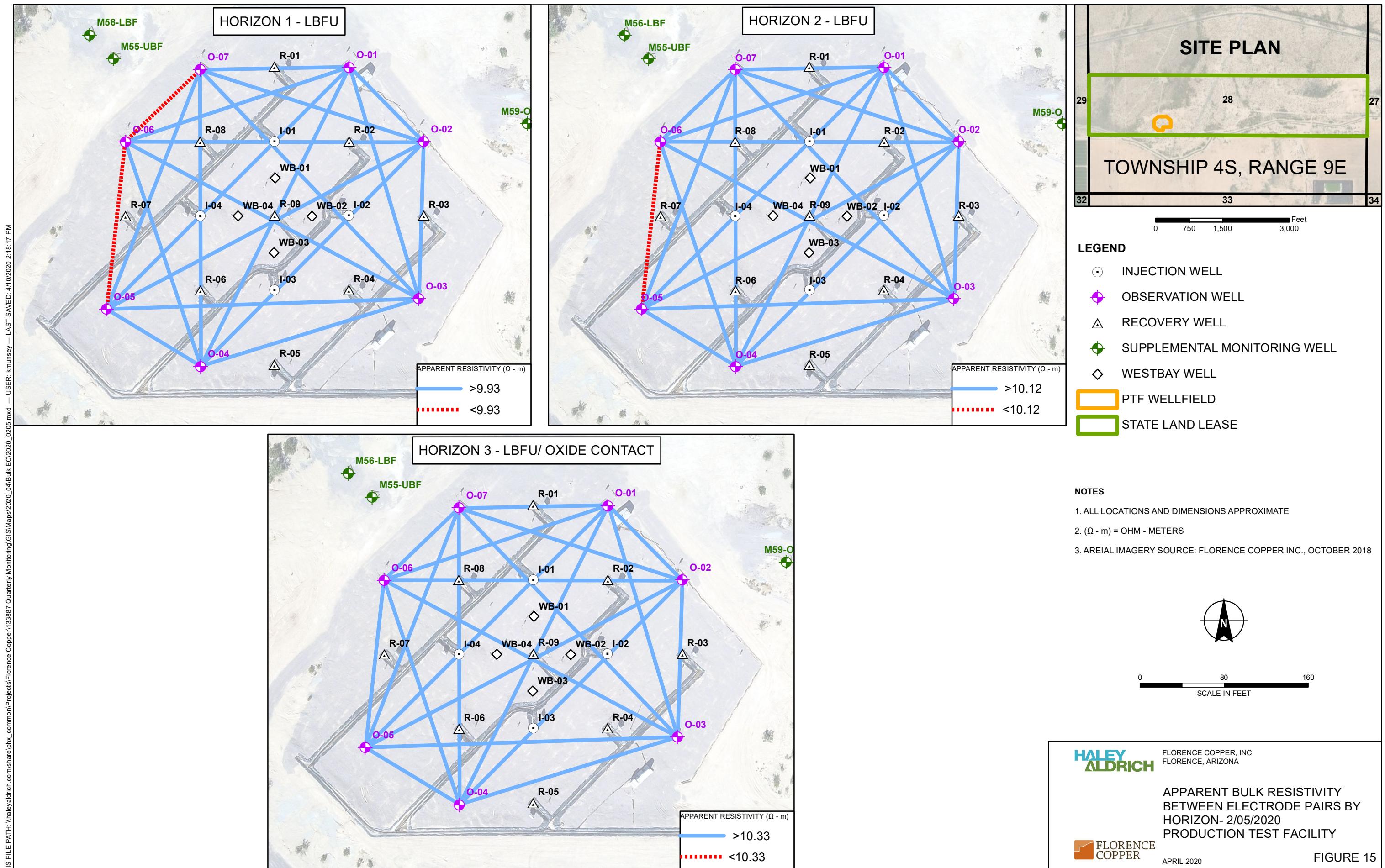


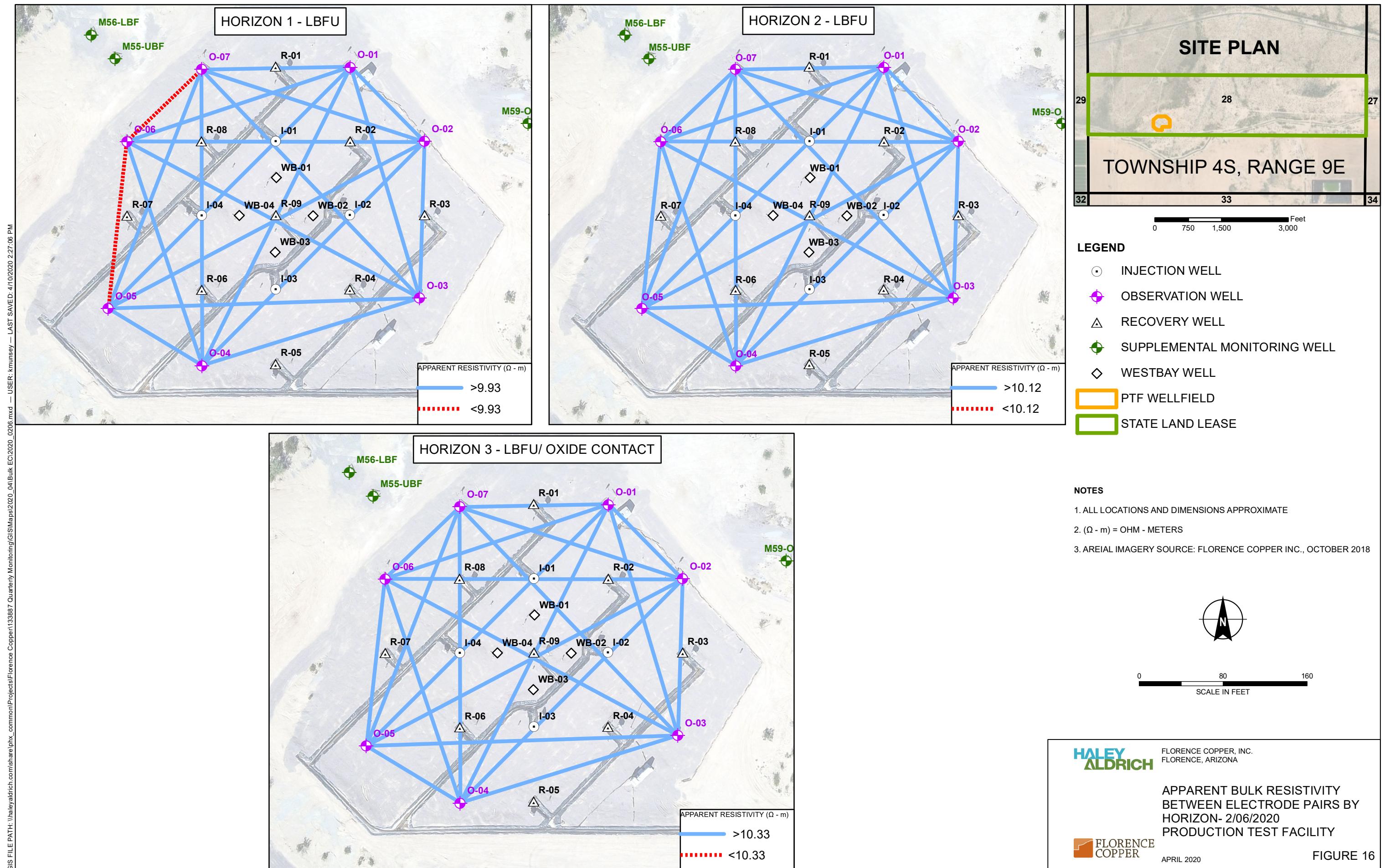


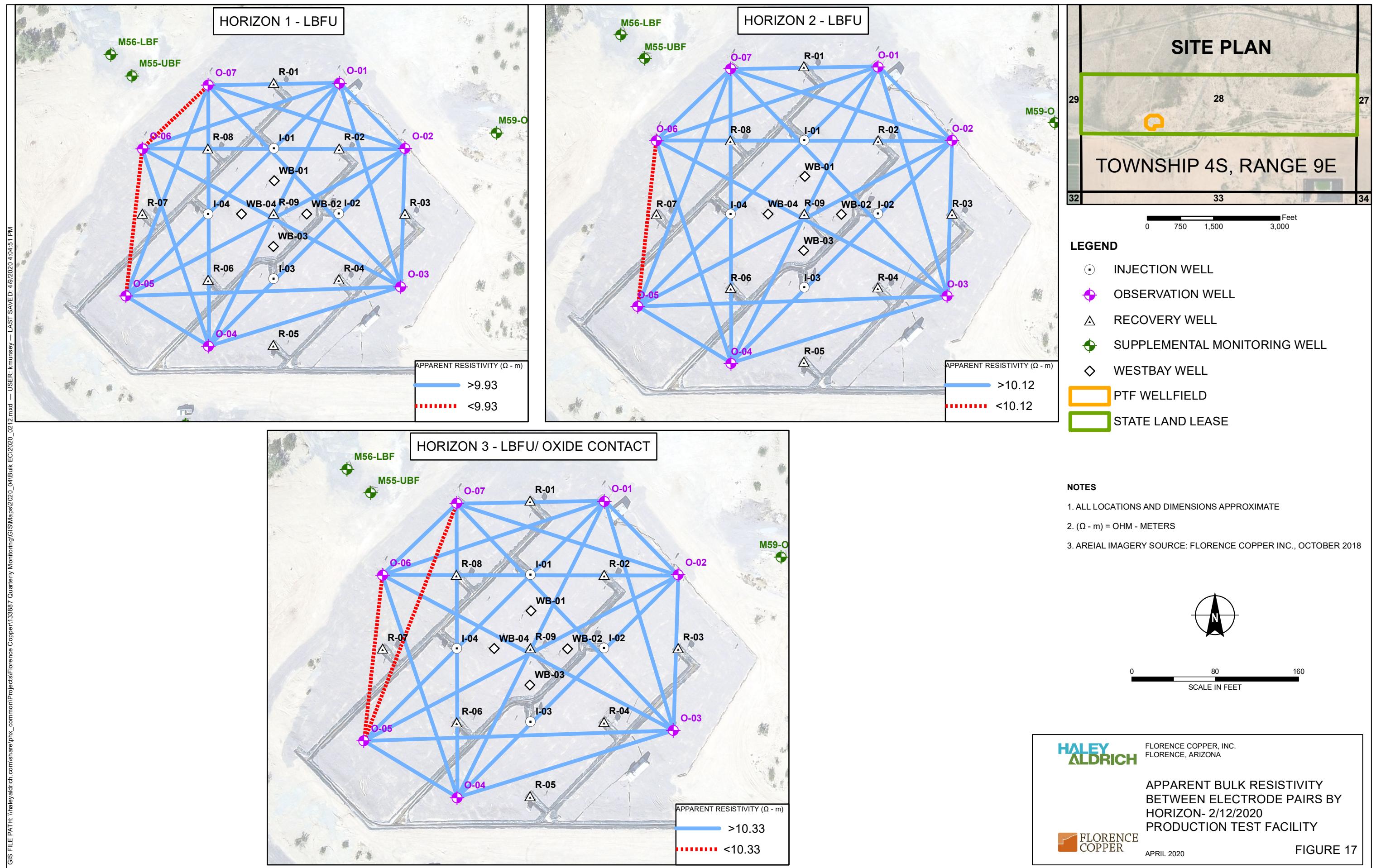


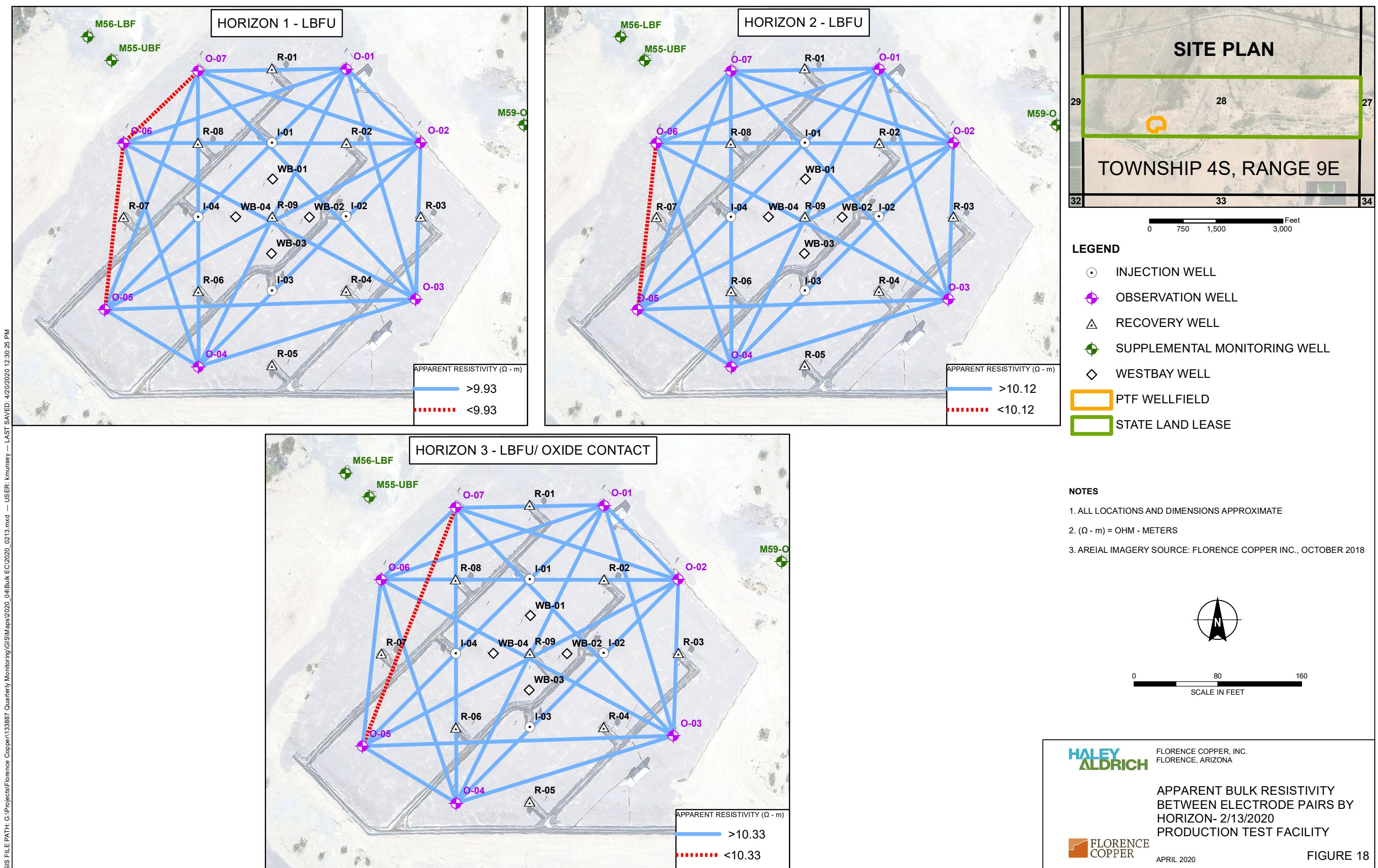


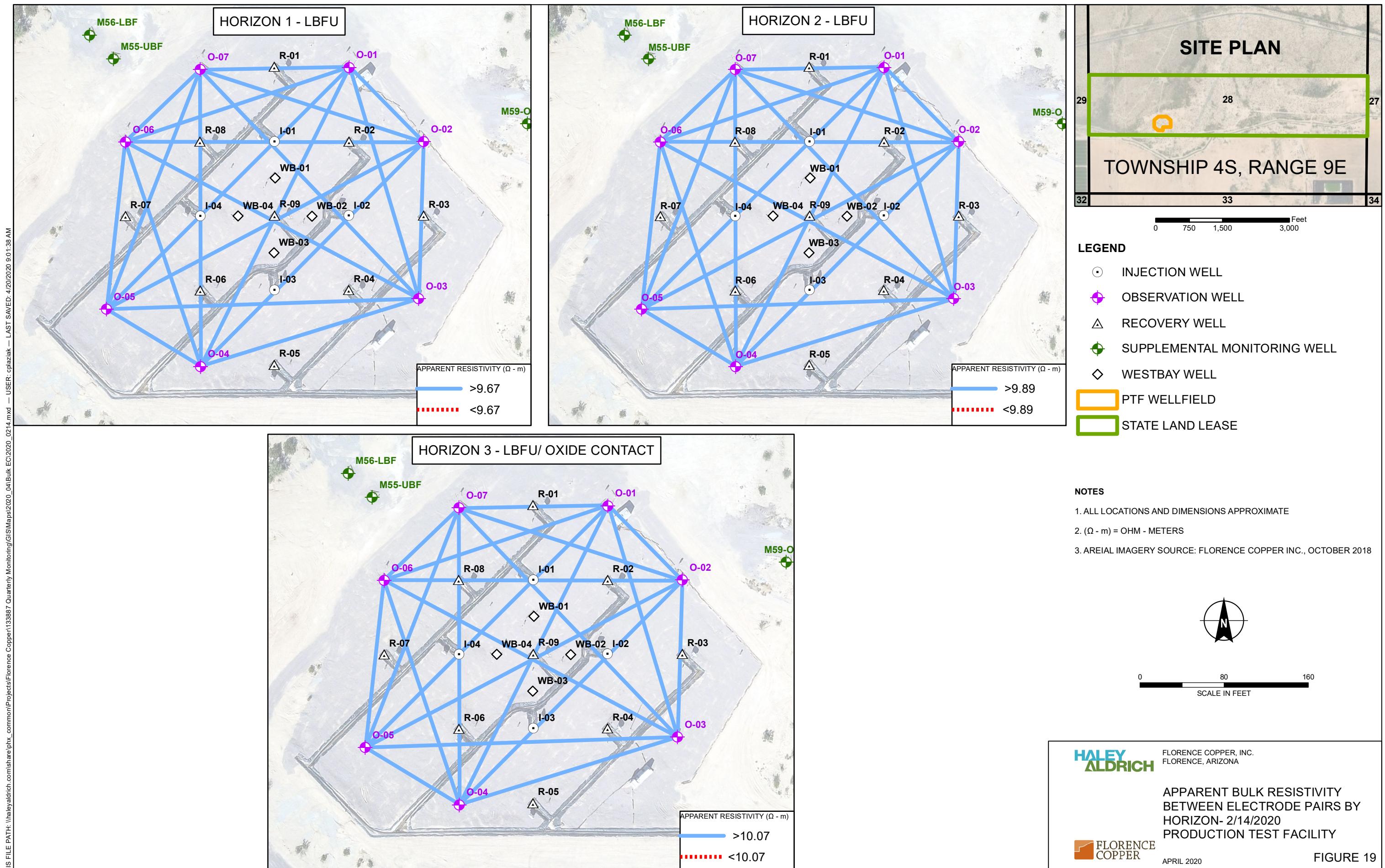


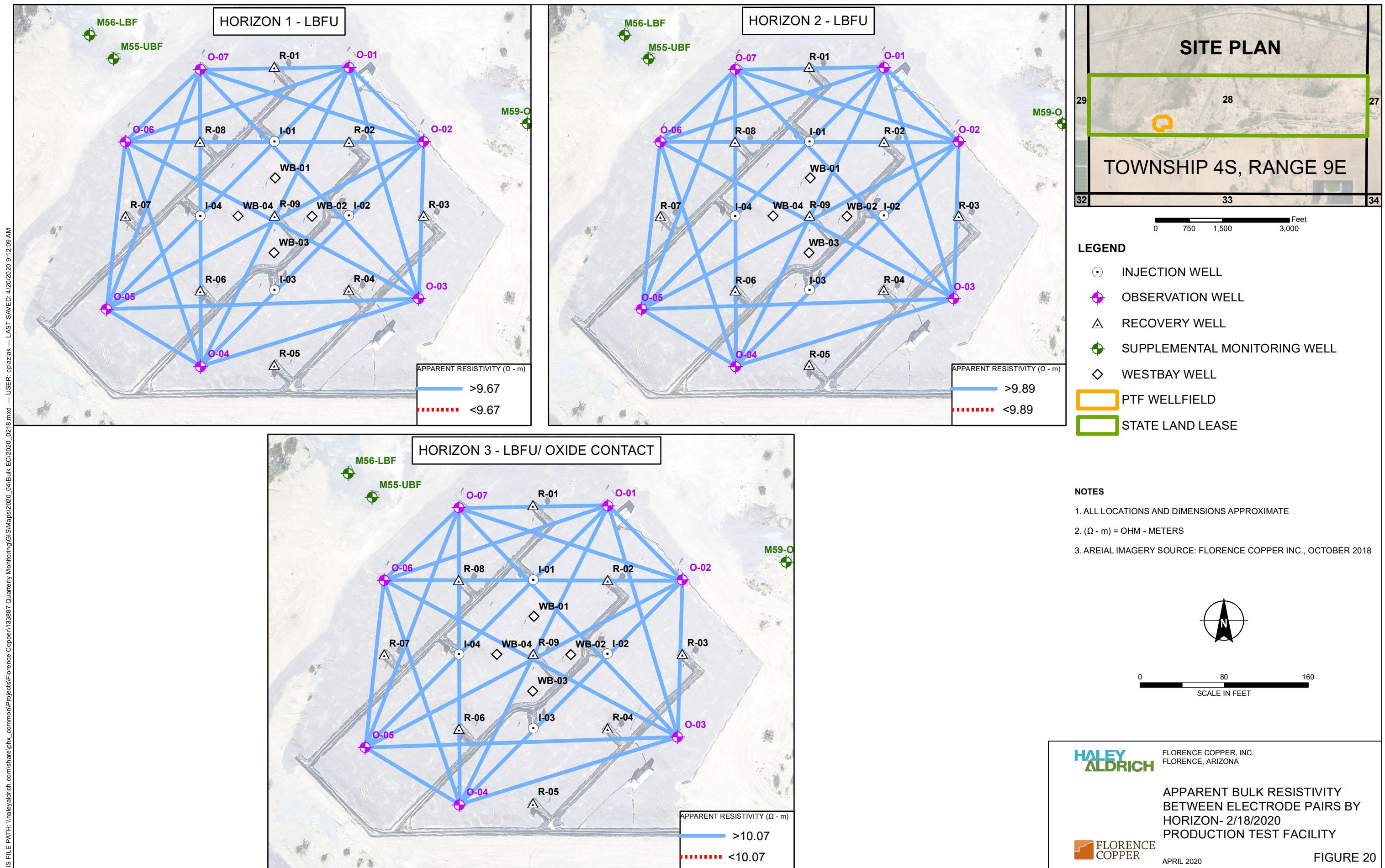


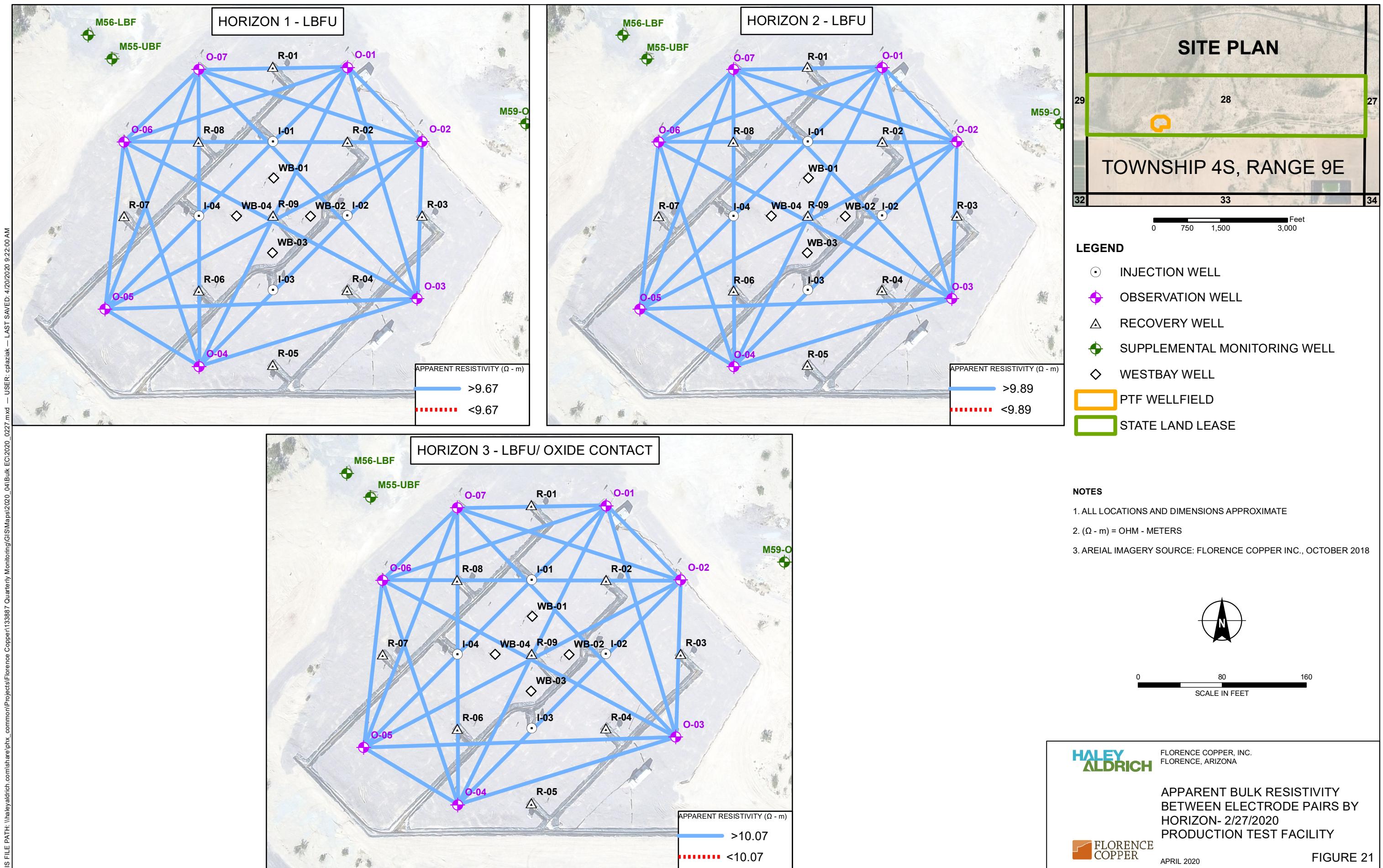


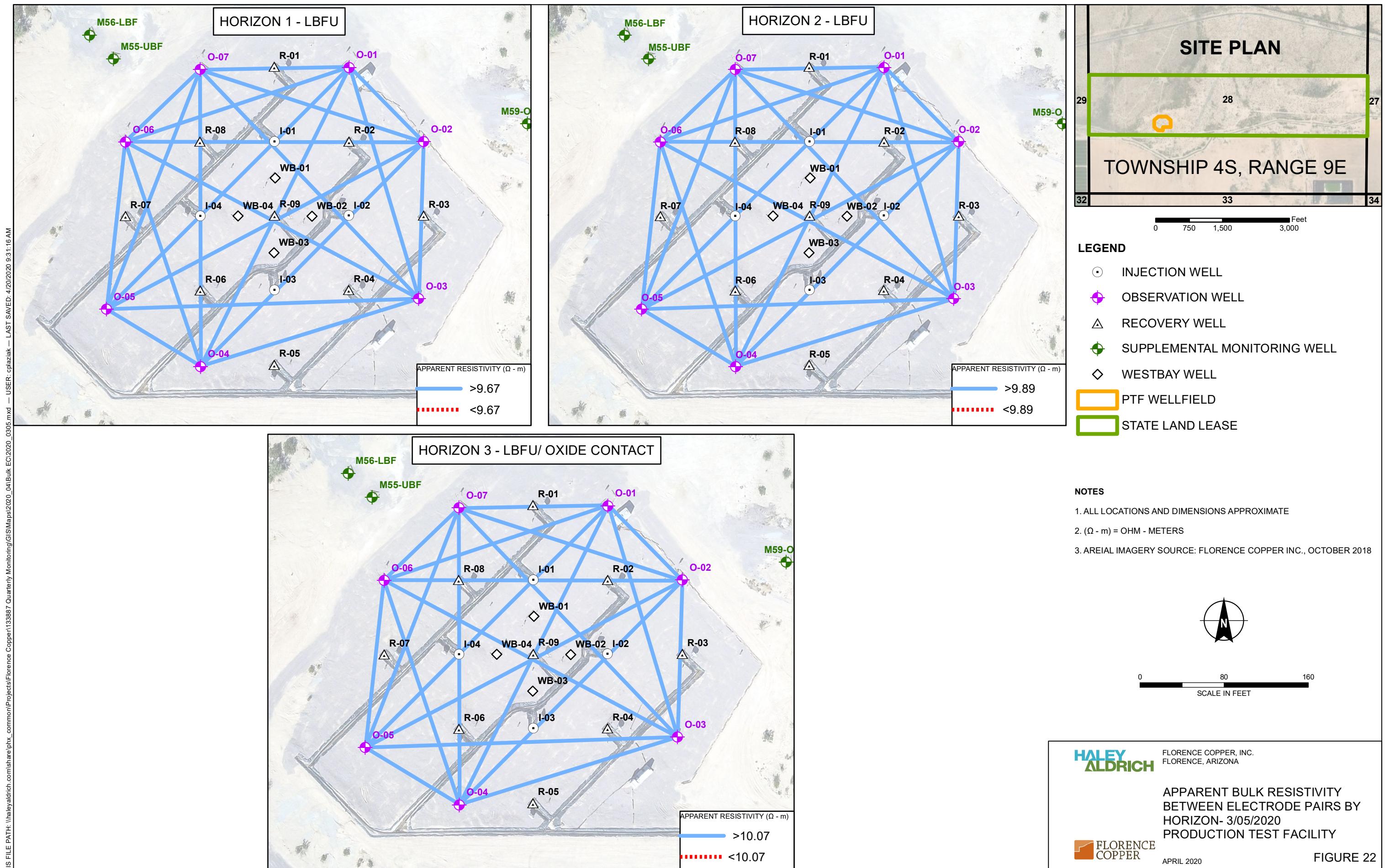


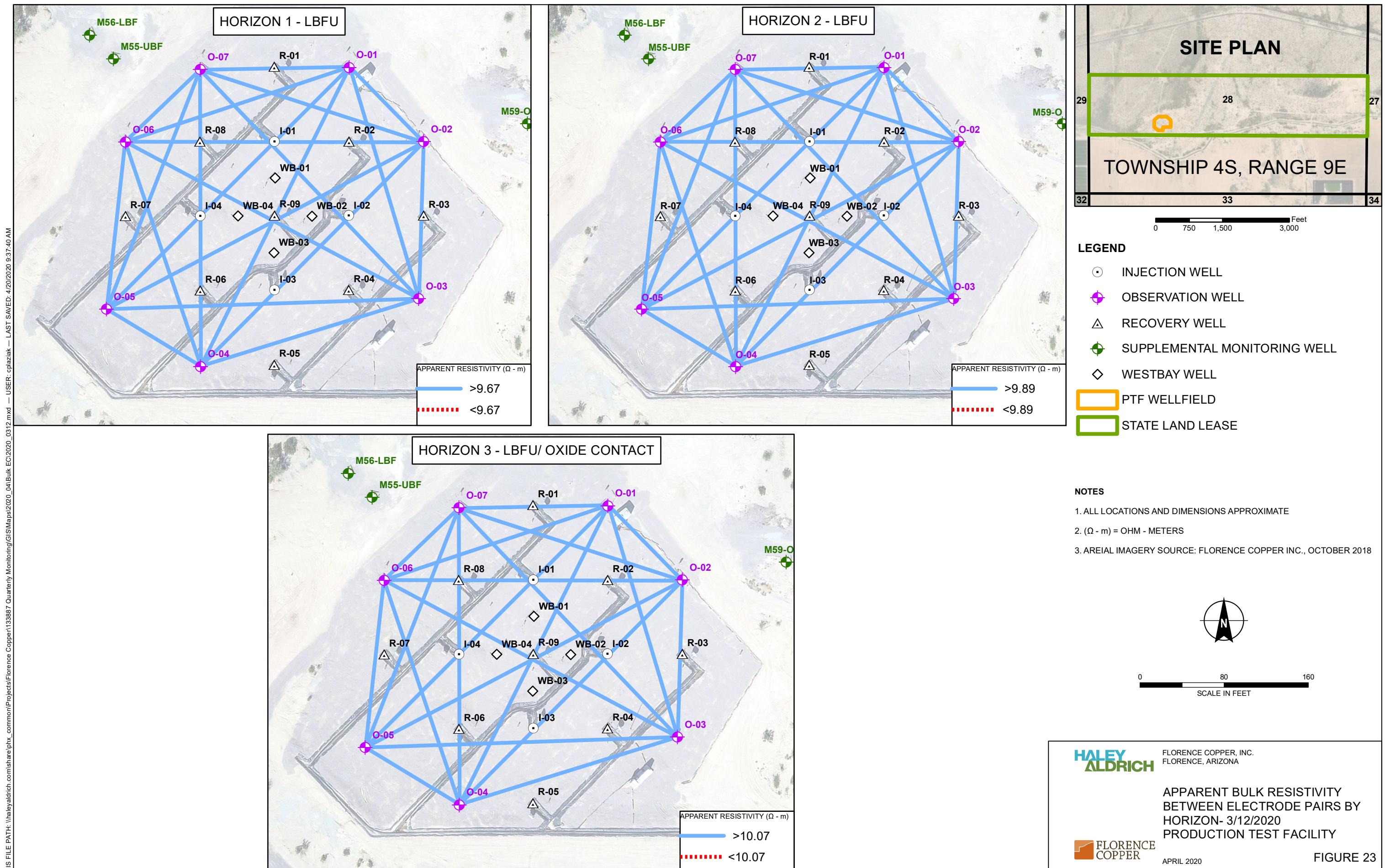


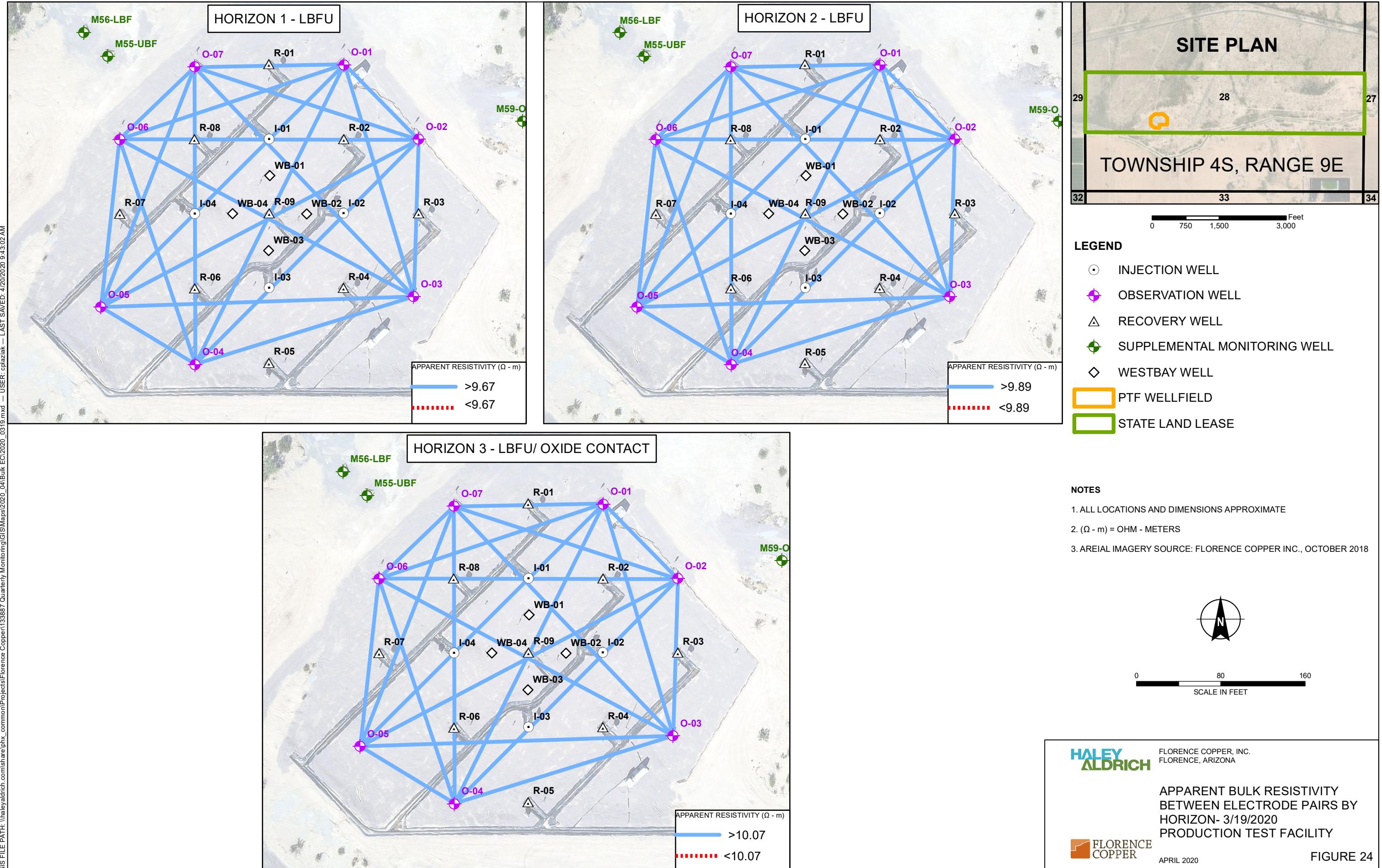


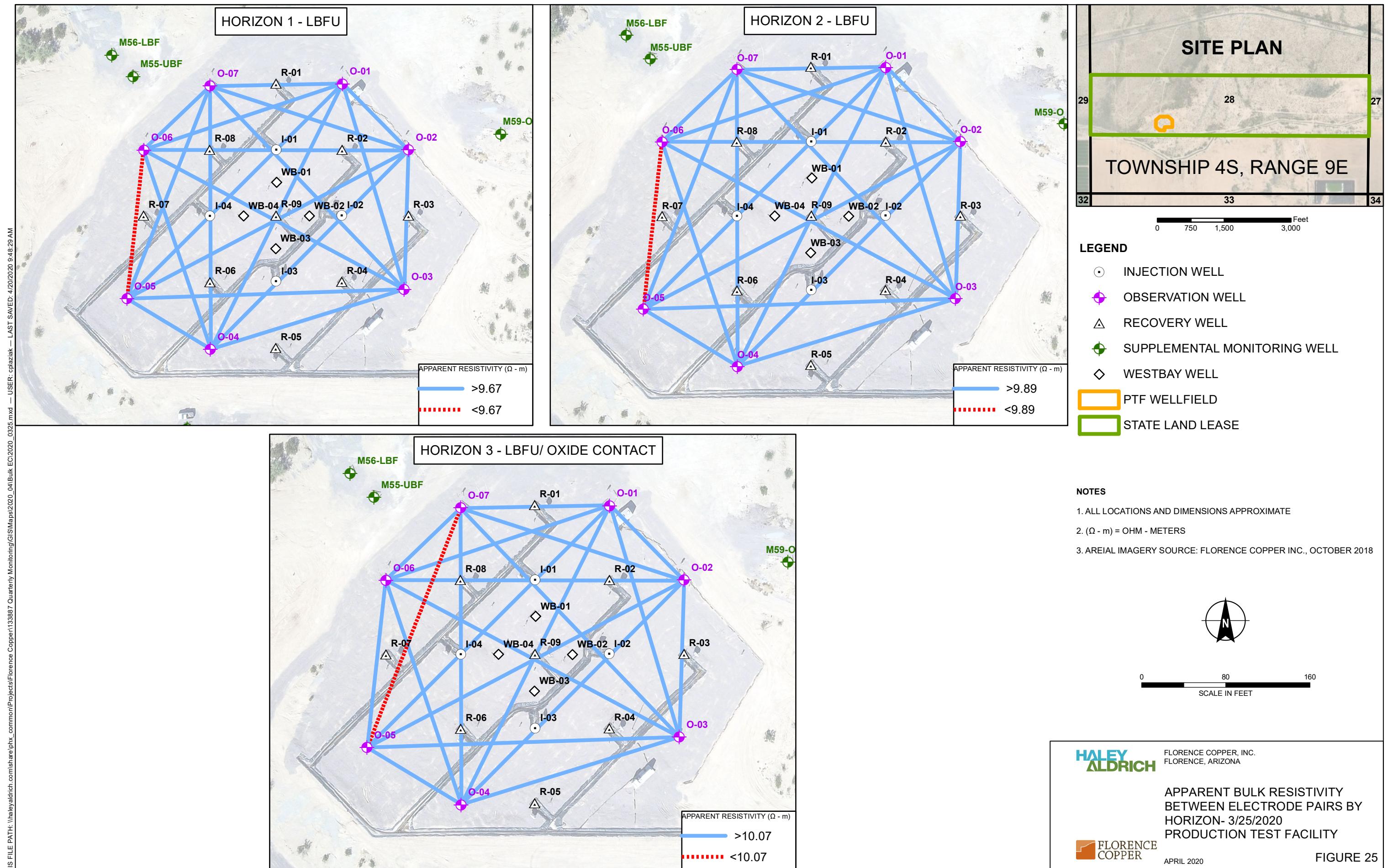


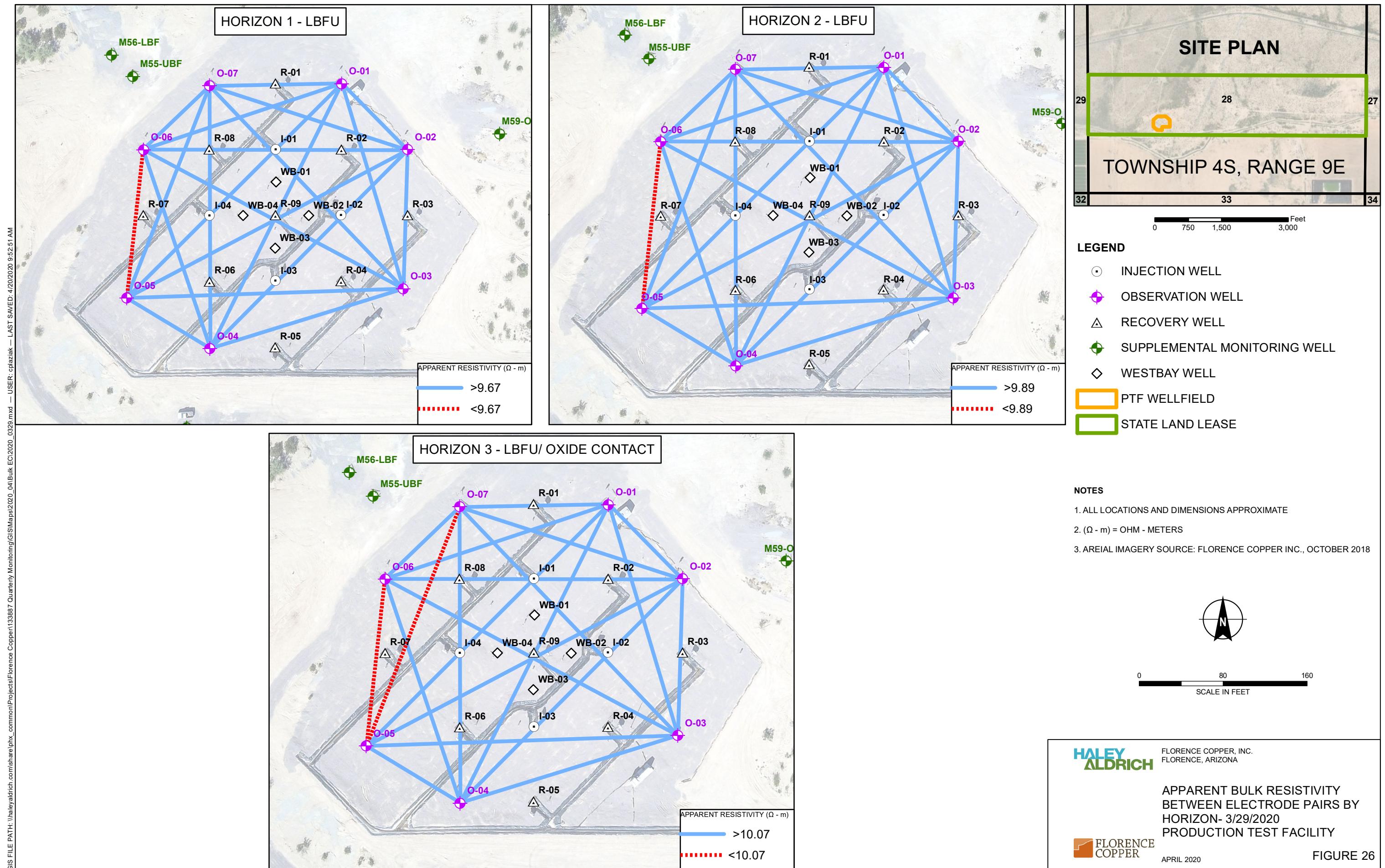










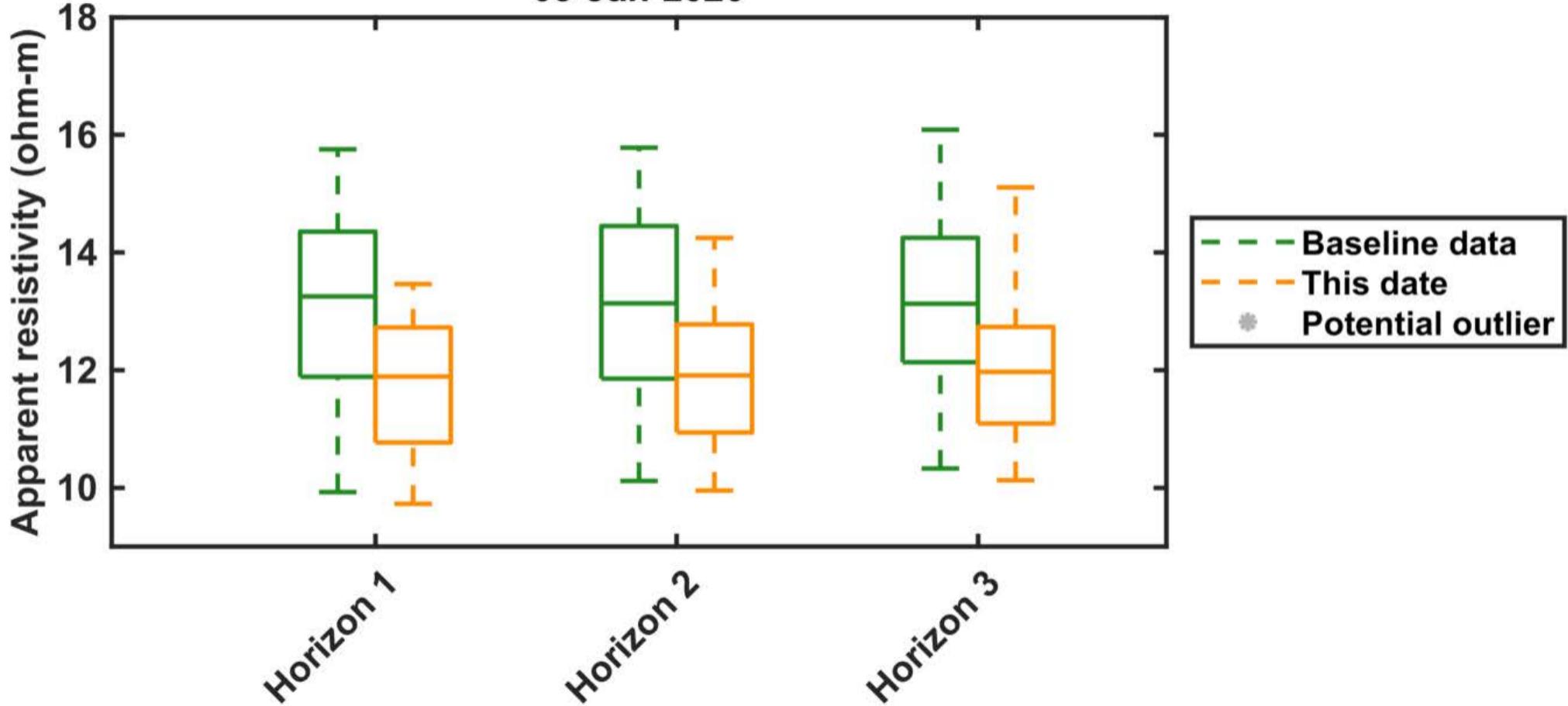


ATTACHMENT A

Box Diagrams for First Quarter Monitoring Data

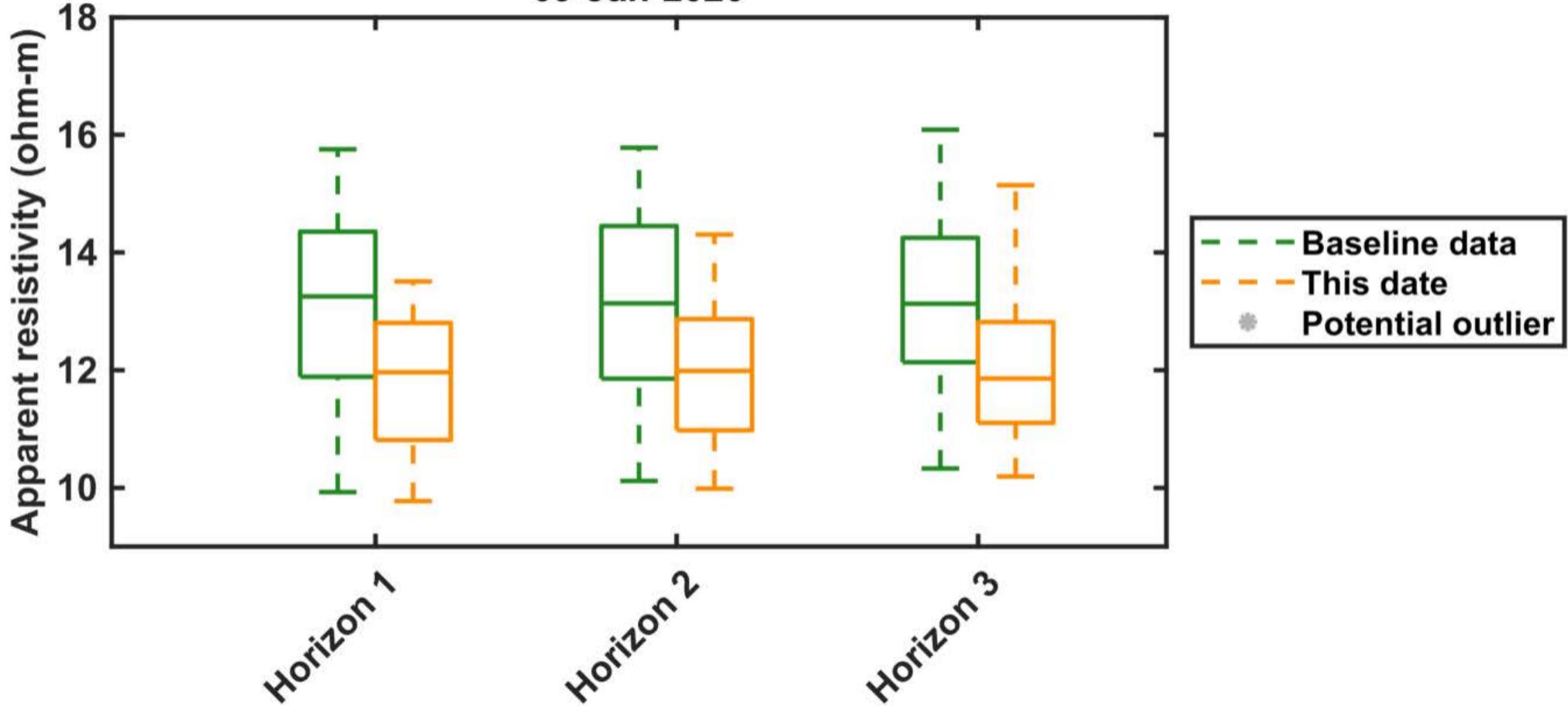
Florence electrical conductivity monitoring

03-Jan-2020



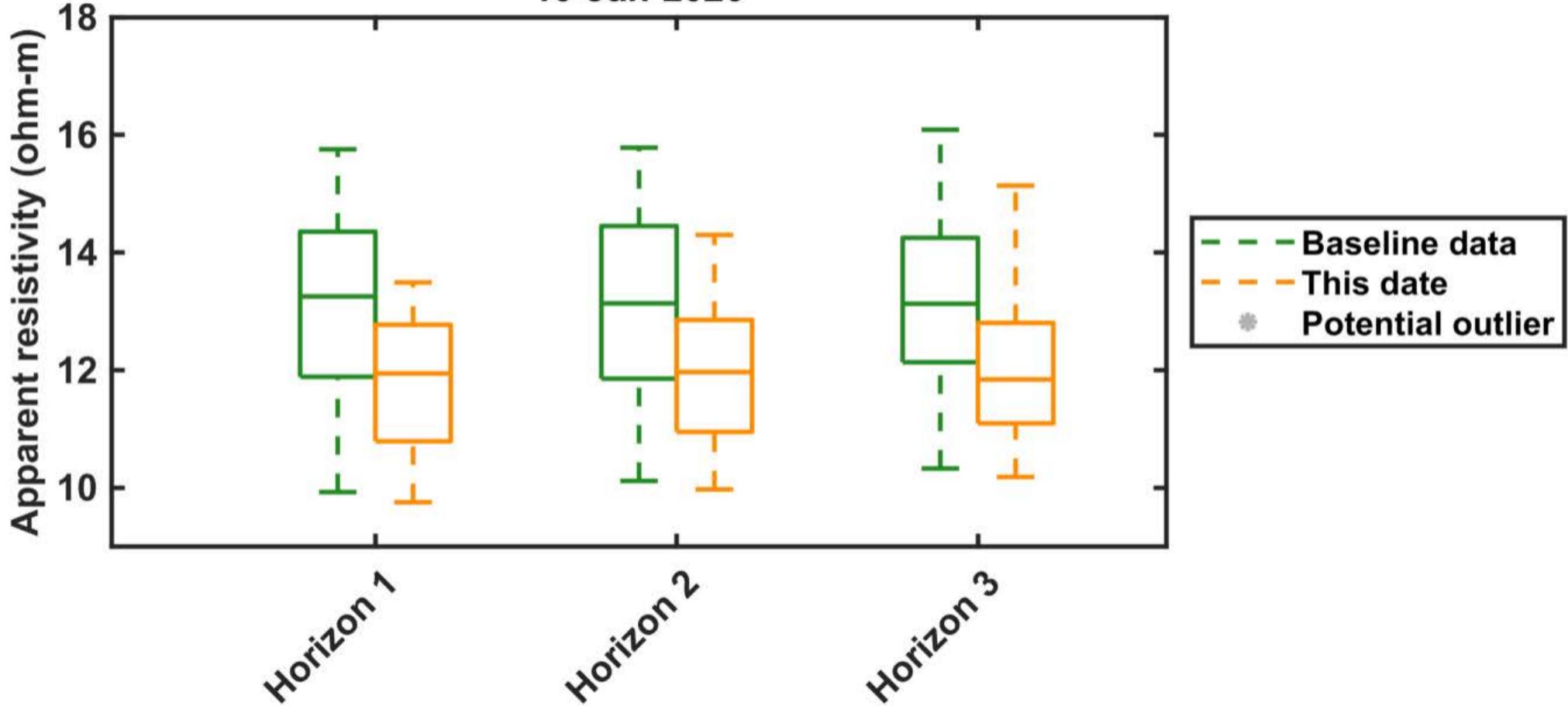
Florence electrical conductivity monitoring

09-Jan-2020



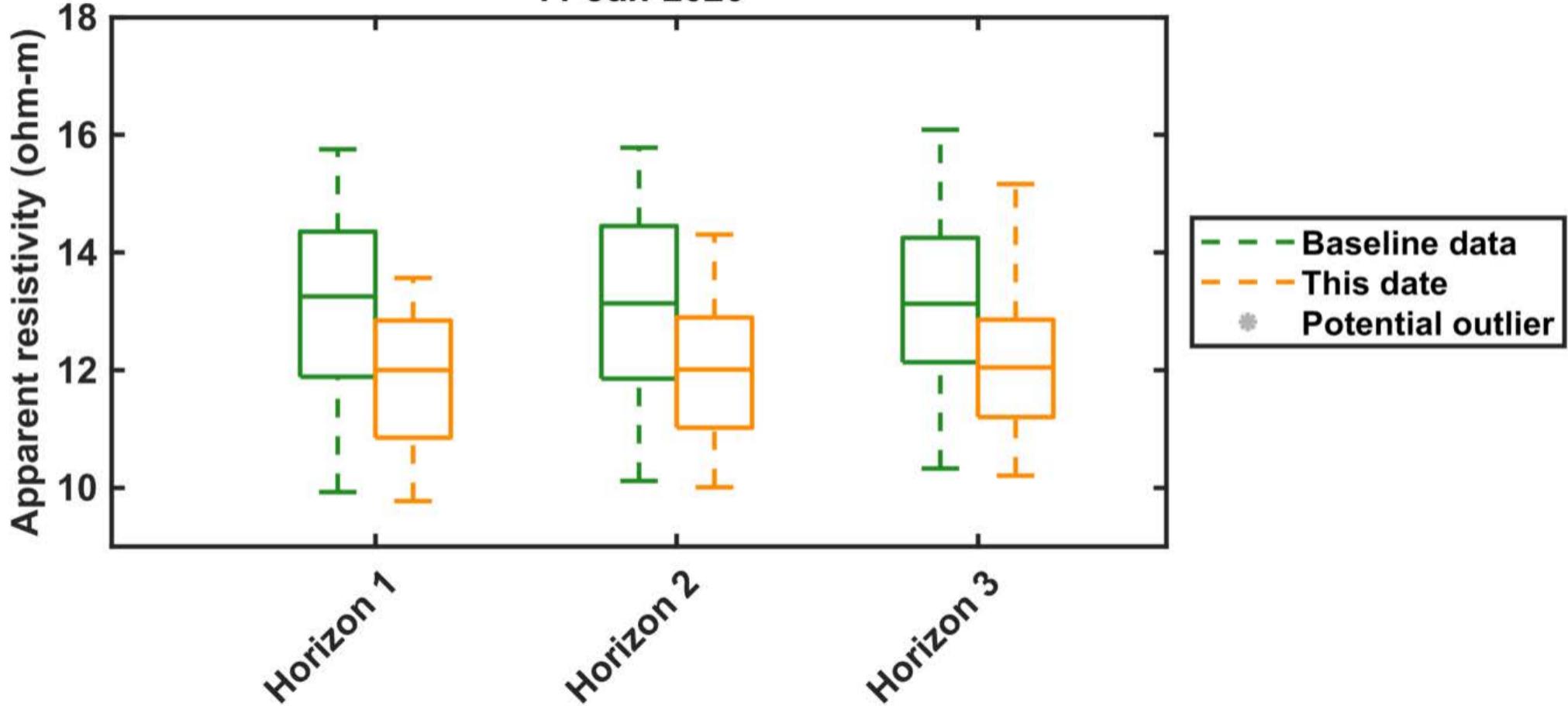
Florence electrical conductivity monitoring

10-Jan-2020



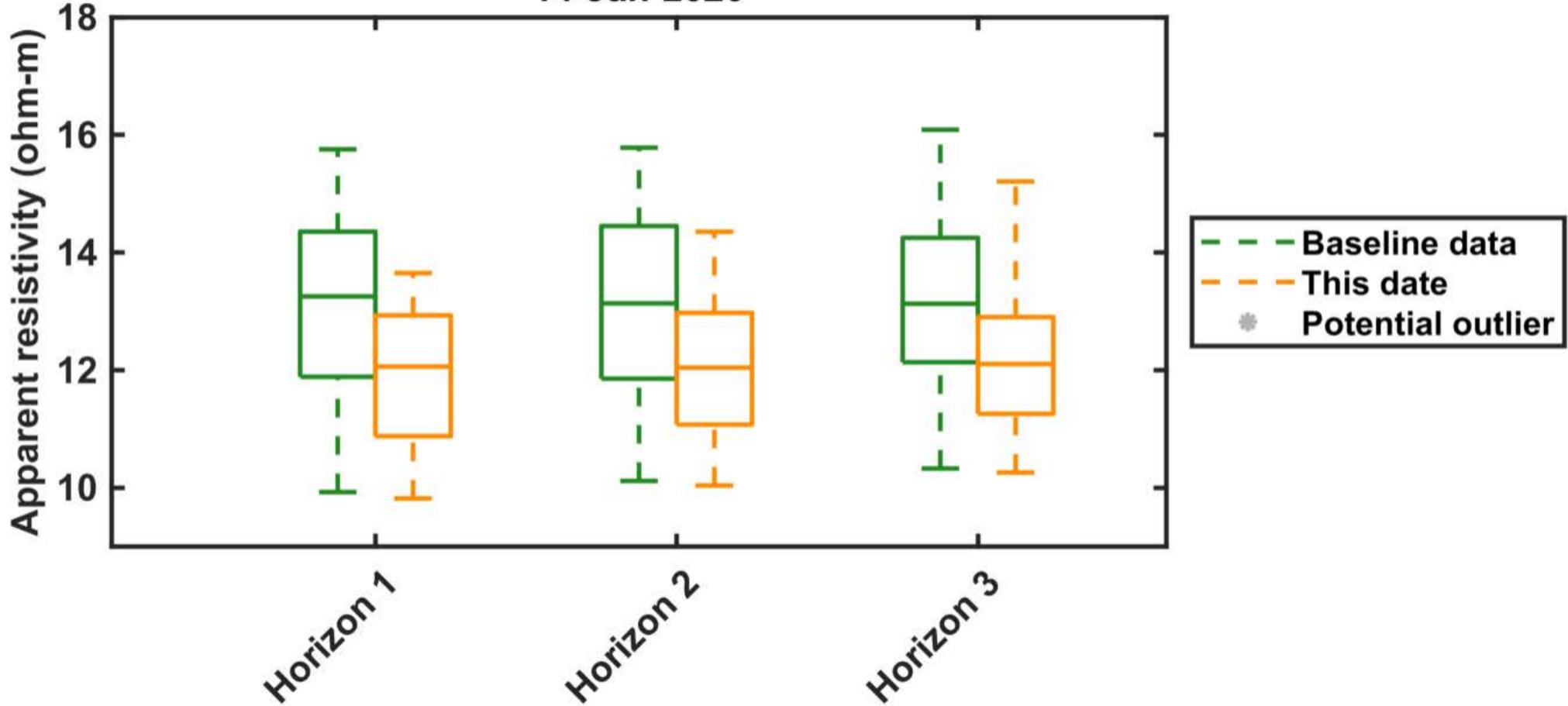
Florence electrical conductivity monitoring

11-Jan-2020



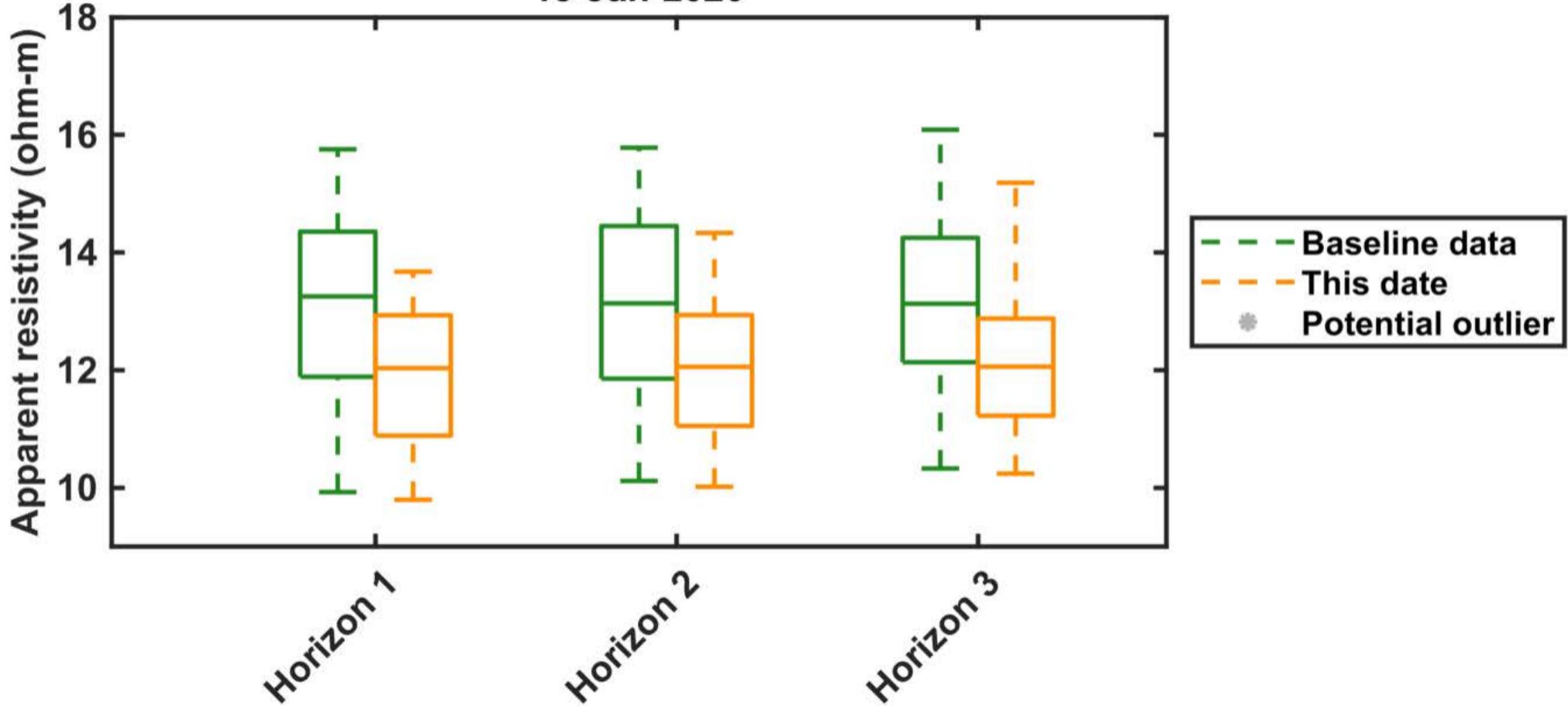
Florence electrical conductivity monitoring

14-Jan-2020



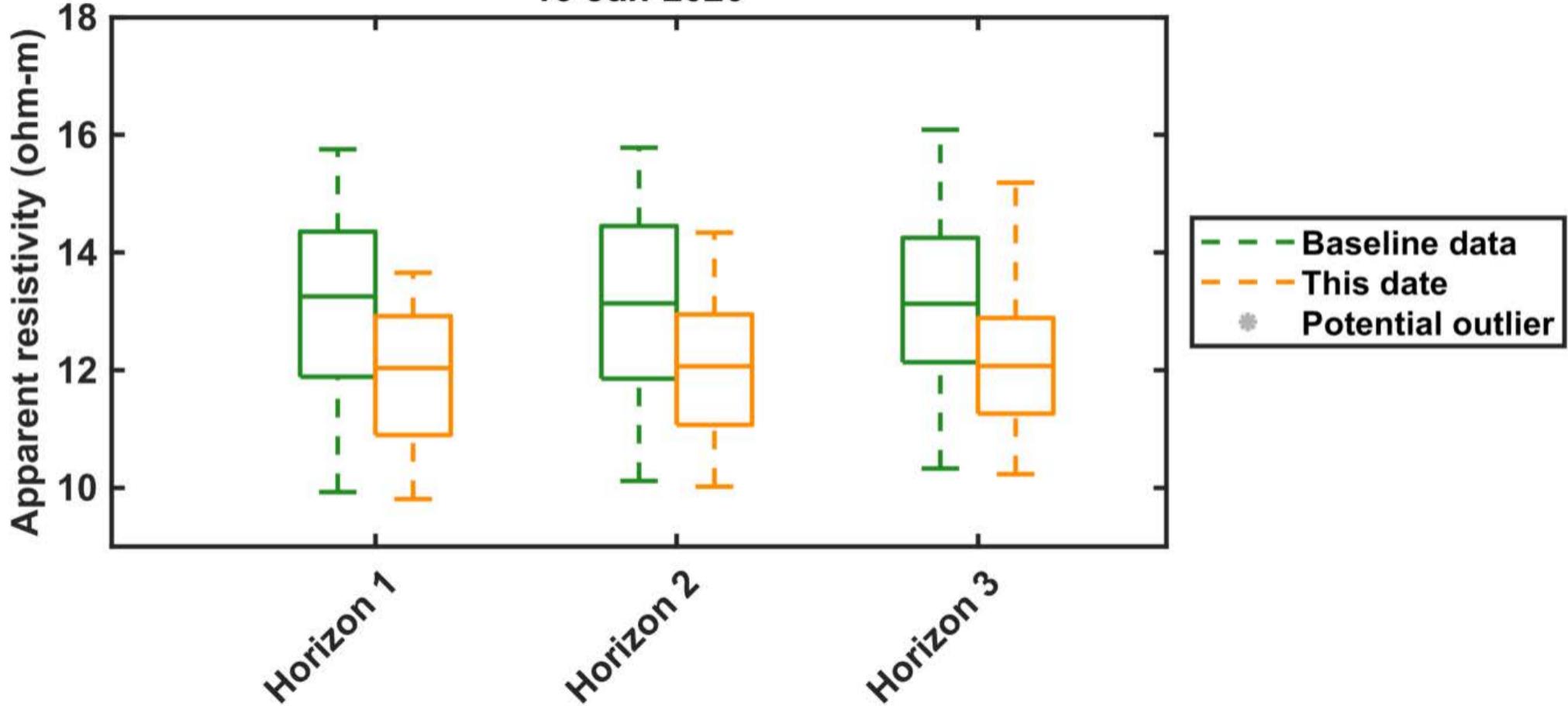
Florence electrical conductivity monitoring

15-Jan-2020



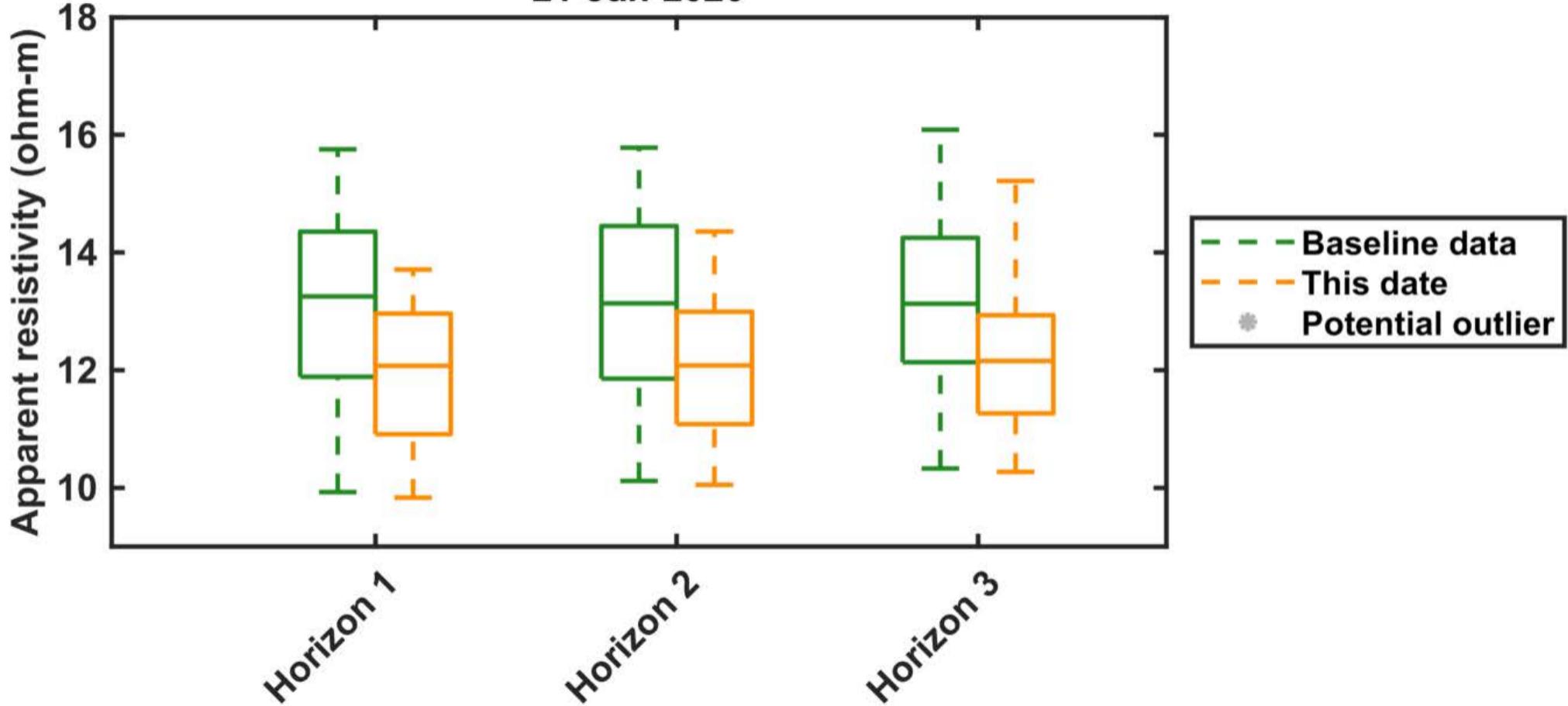
Florence electrical conductivity monitoring

16-Jan-2020



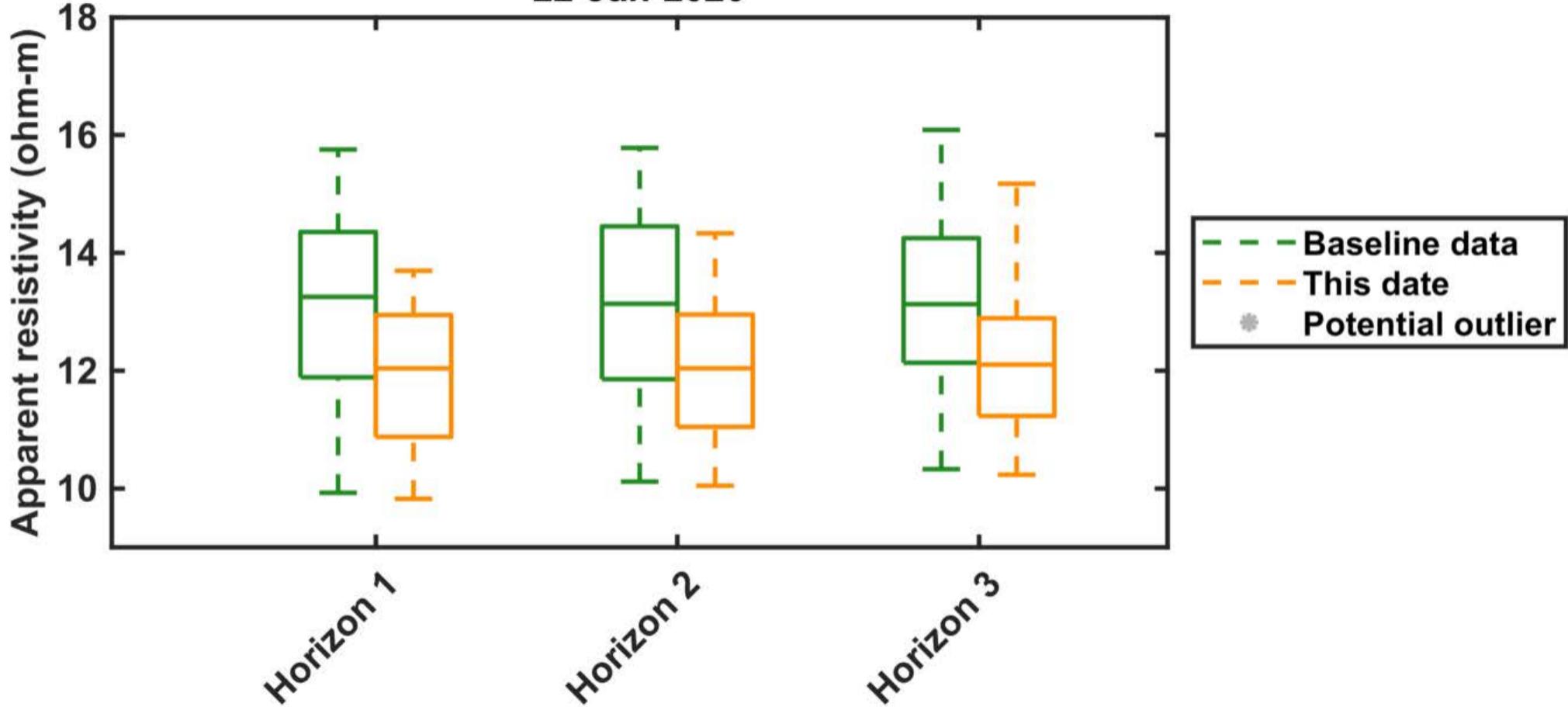
Florence electrical conductivity monitoring

21-Jan-2020



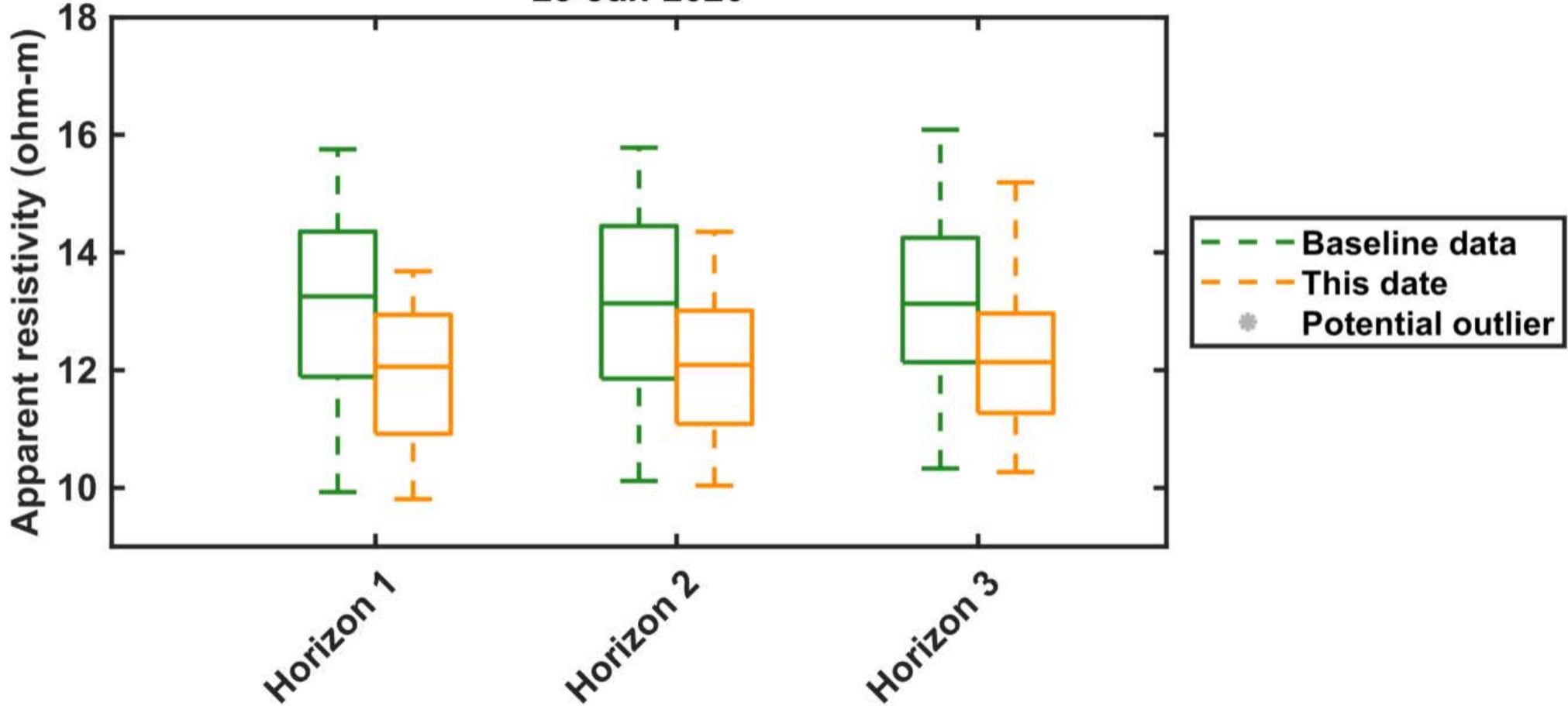
Florence electrical conductivity monitoring

22-Jan-2020



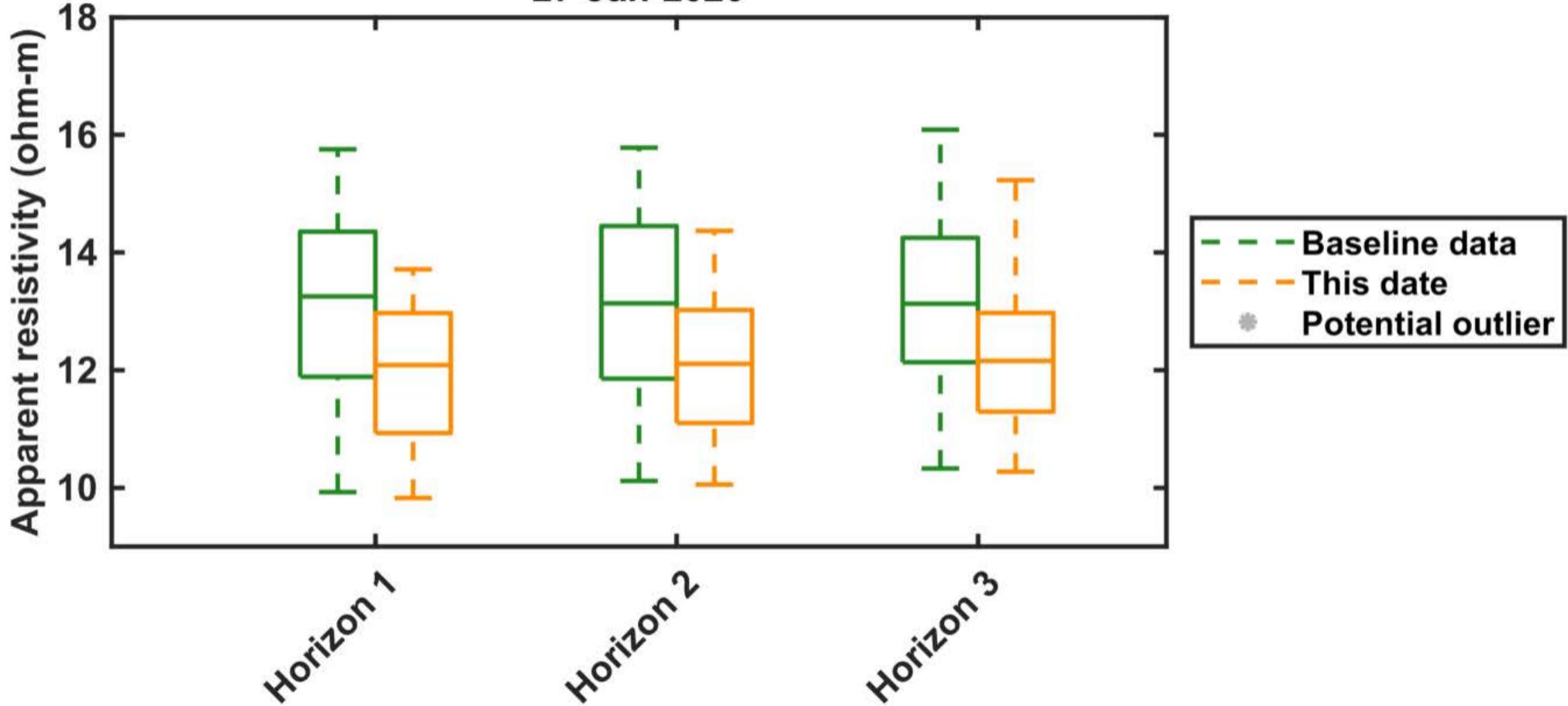
Florence electrical conductivity monitoring

23-Jan-2020



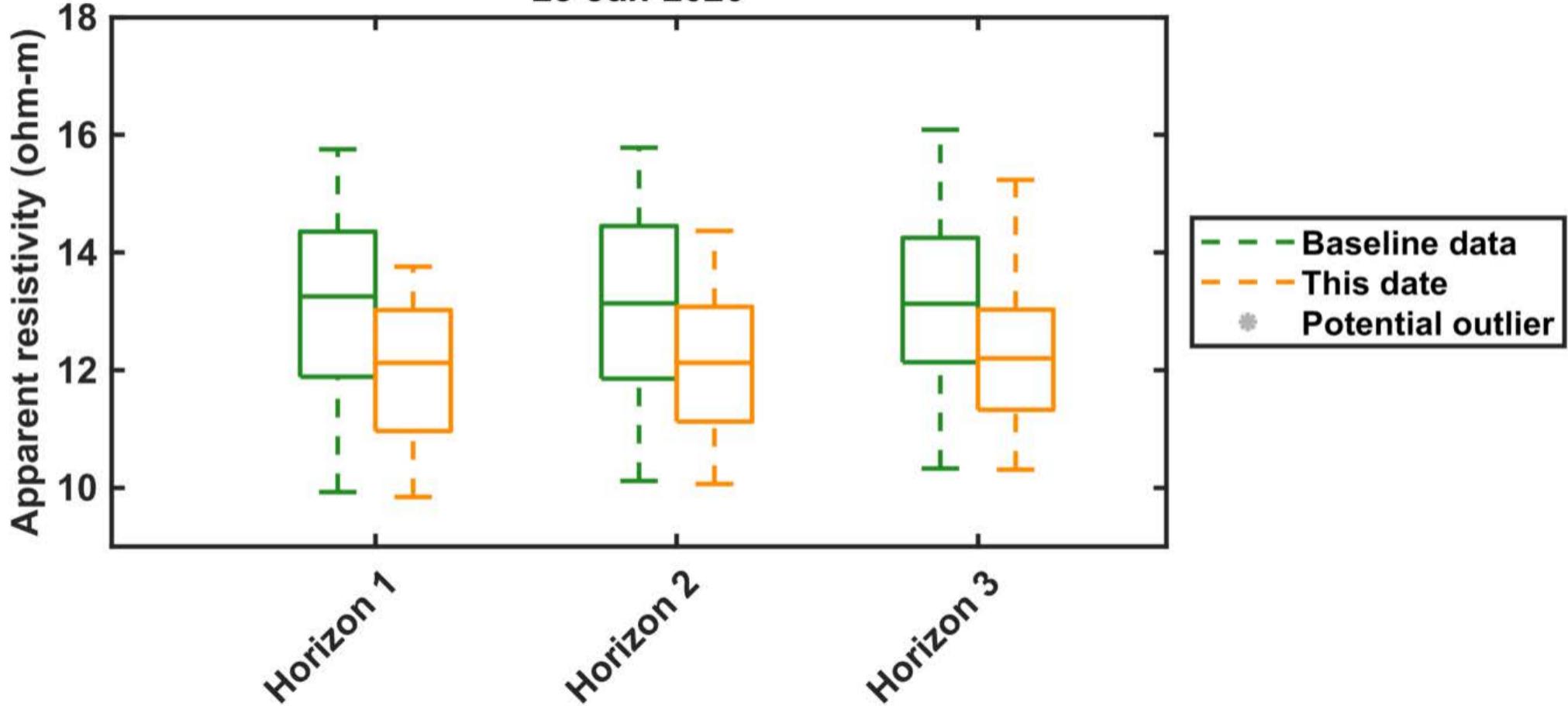
Florence electrical conductivity monitoring

27-Jan-2020



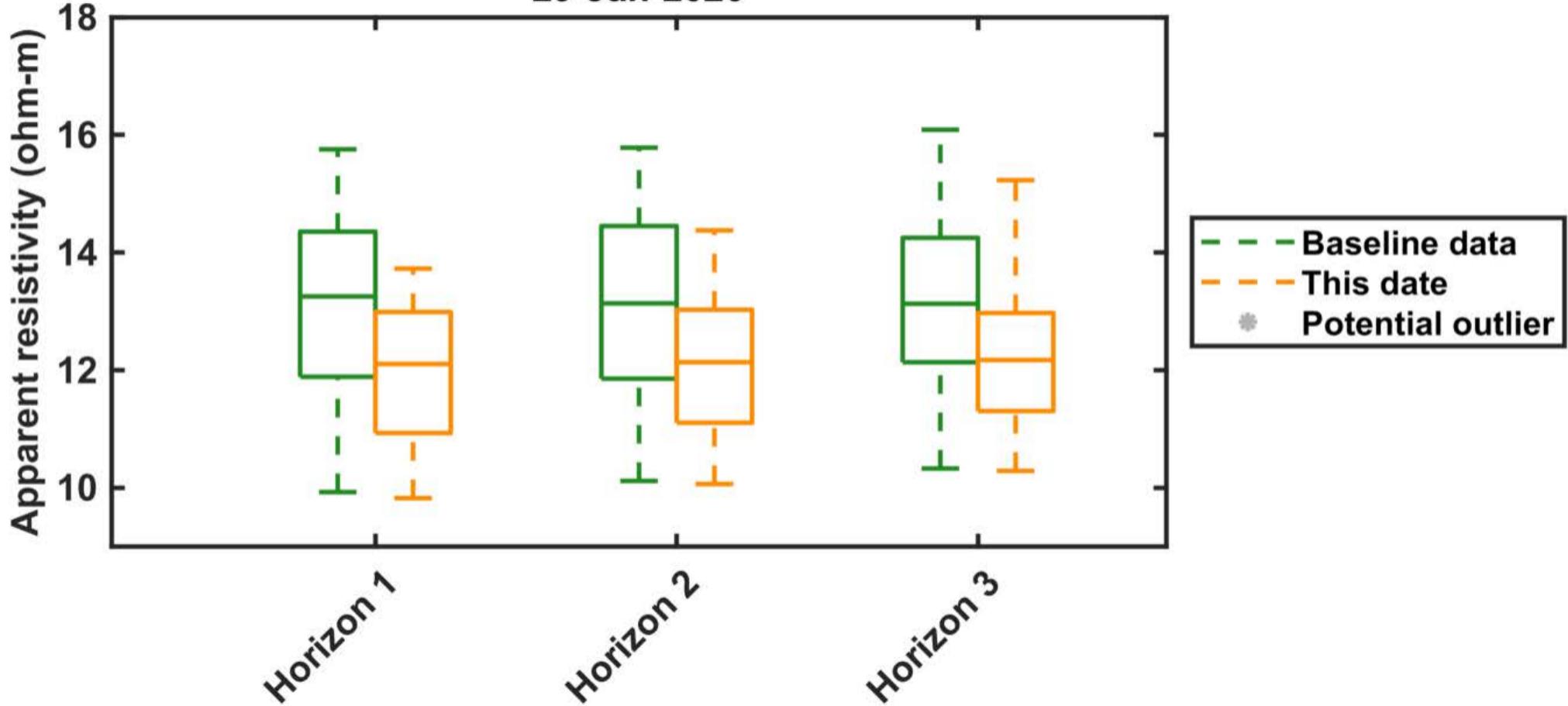
Florence electrical conductivity monitoring

28-Jan-2020



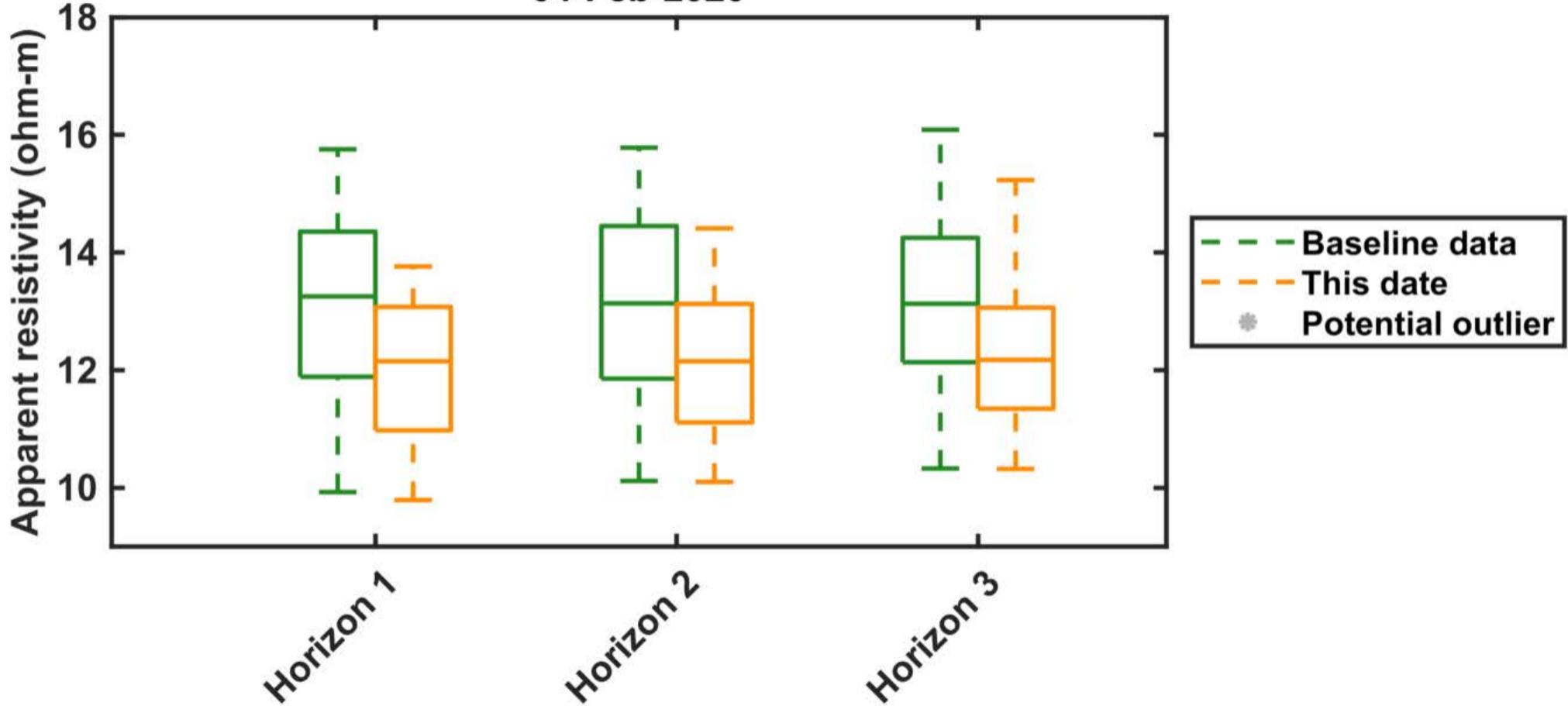
Florence electrical conductivity monitoring

29-Jan-2020



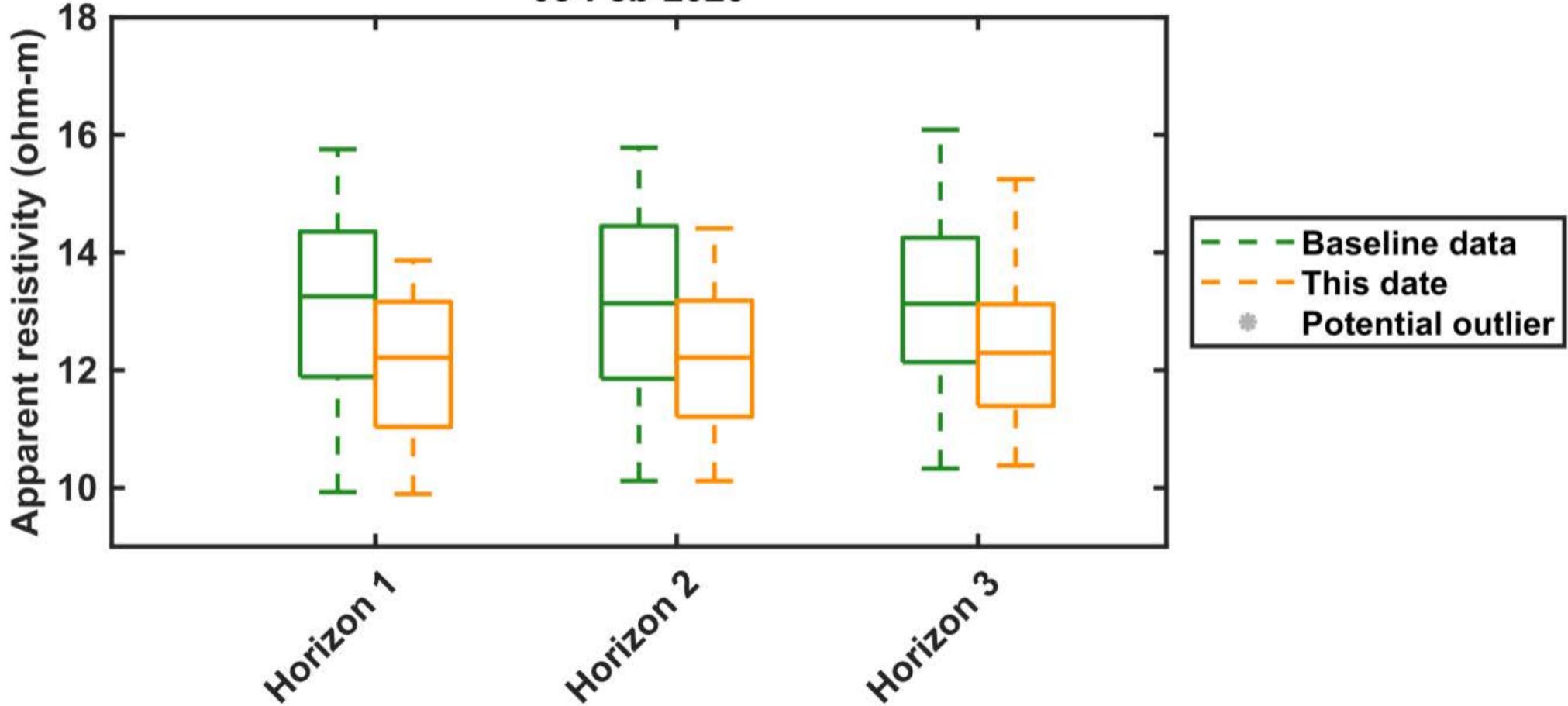
Florence electrical conductivity monitoring

04-Feb-2020



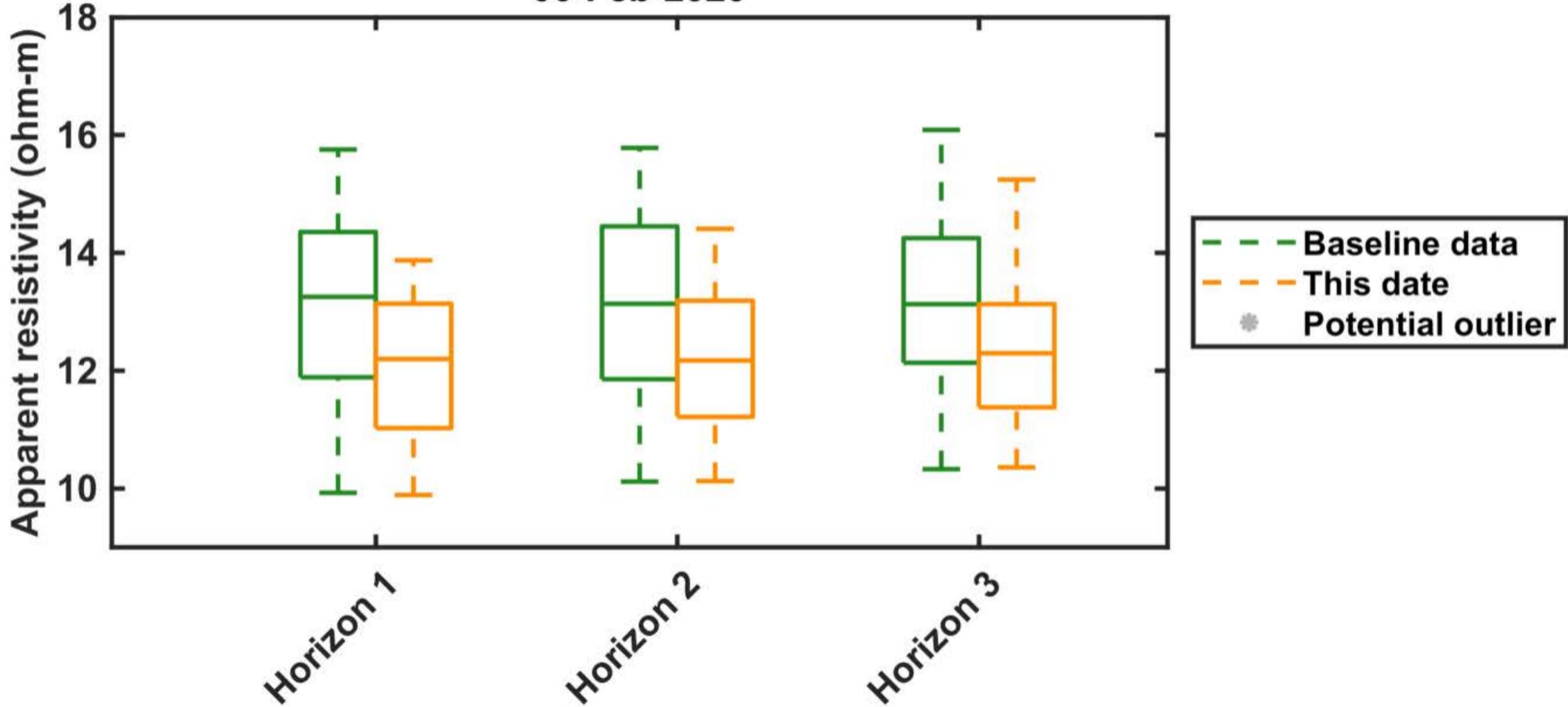
Florence electrical conductivity monitoring

05-Feb-2020



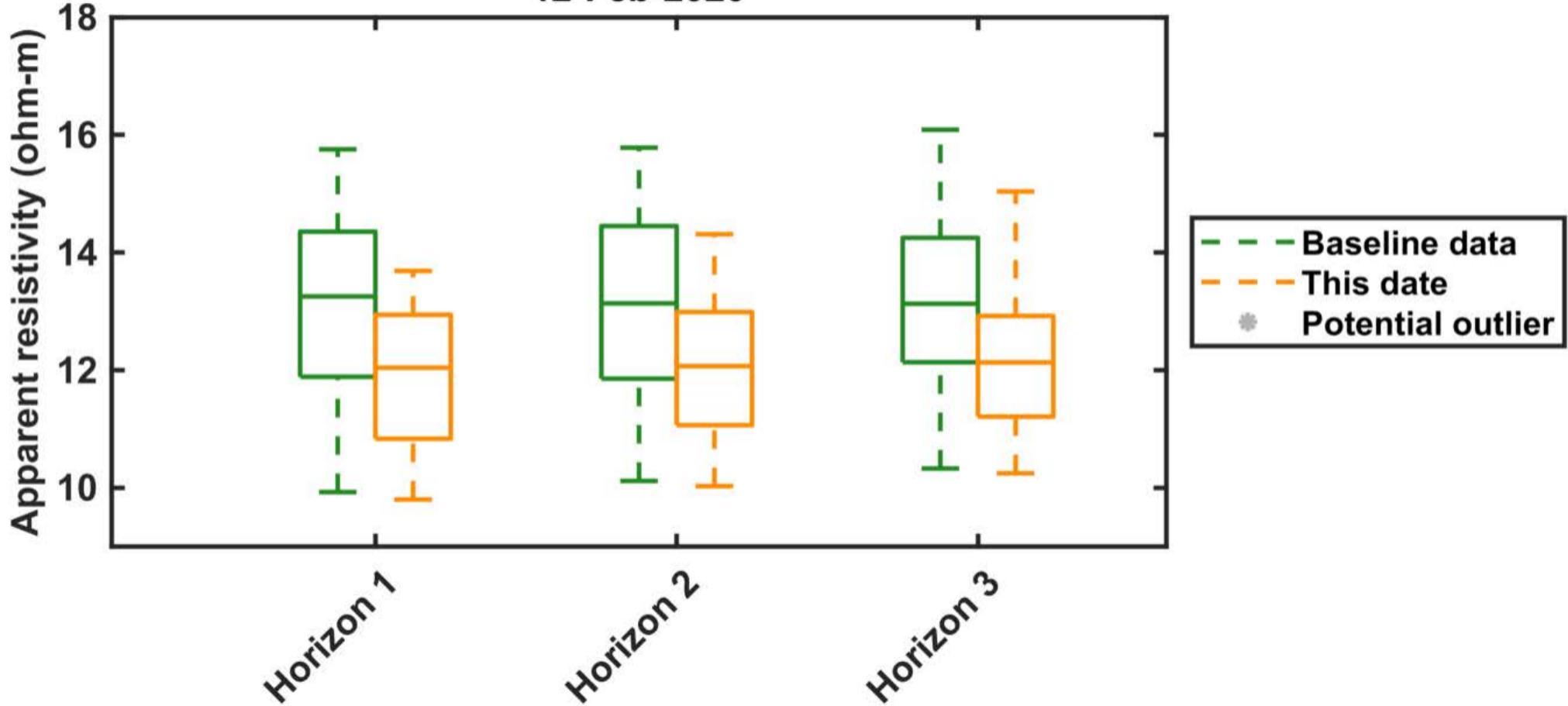
Florence electrical conductivity monitoring

06-Feb-2020



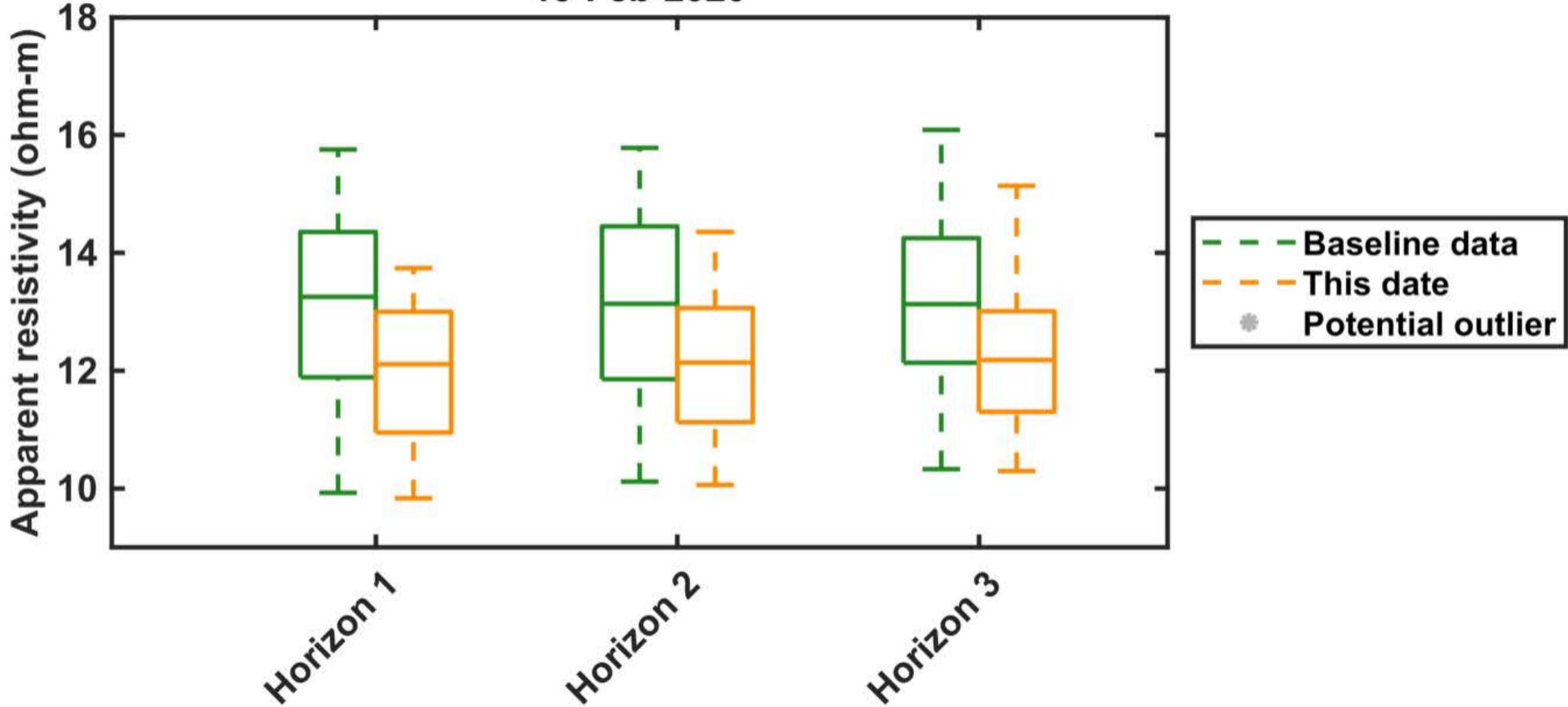
Florence electrical conductivity monitoring

12-Feb-2020



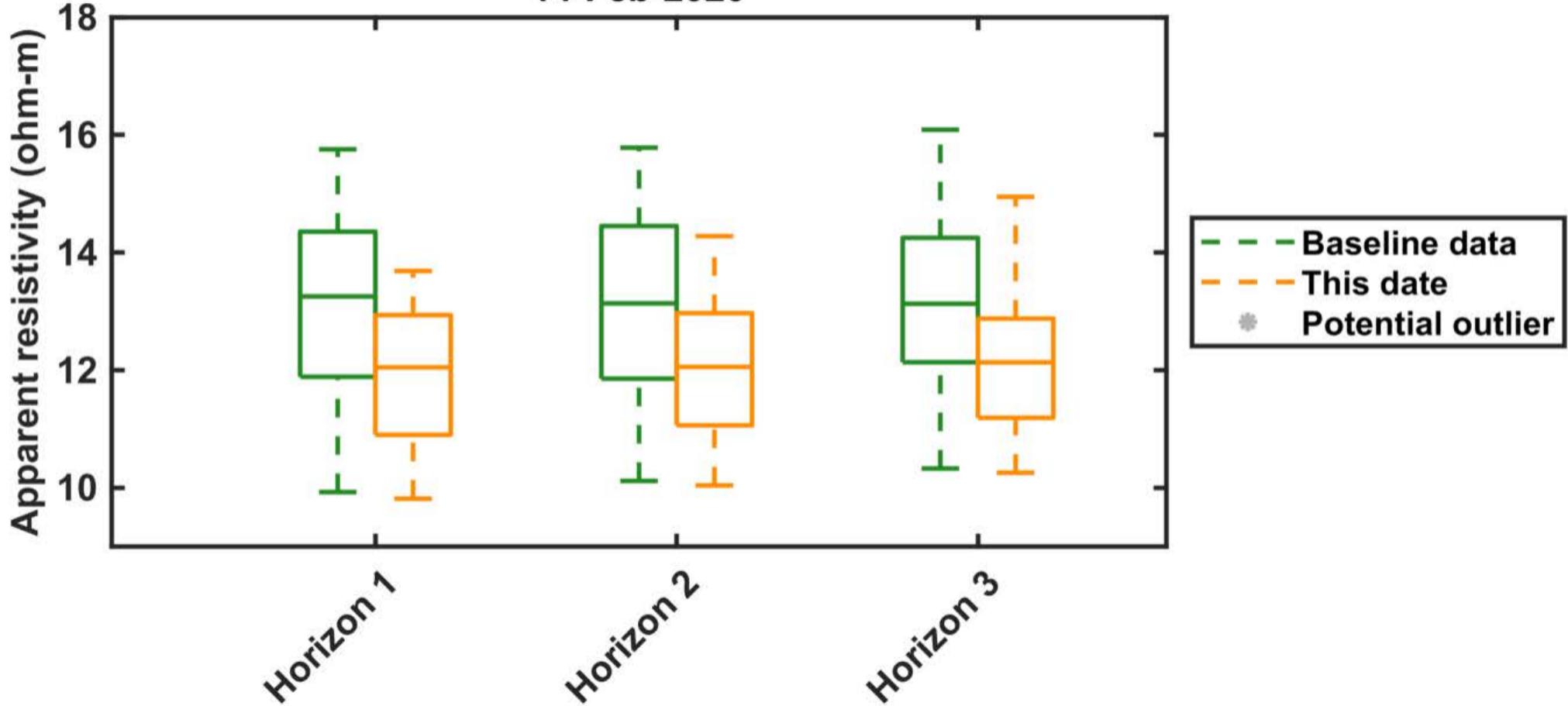
Florence electrical conductivity monitoring

13-Feb-2020



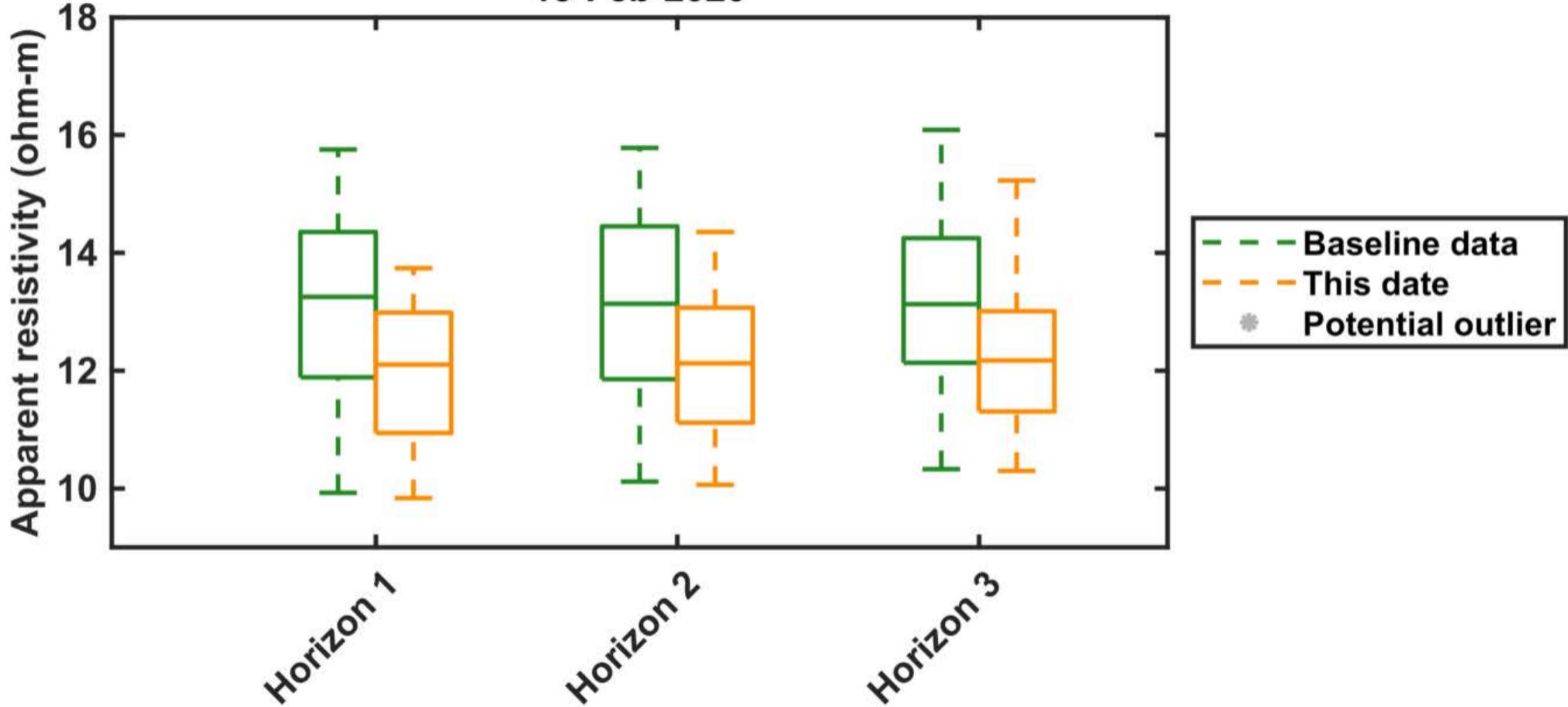
Florence electrical conductivity monitoring

14-Feb-2020



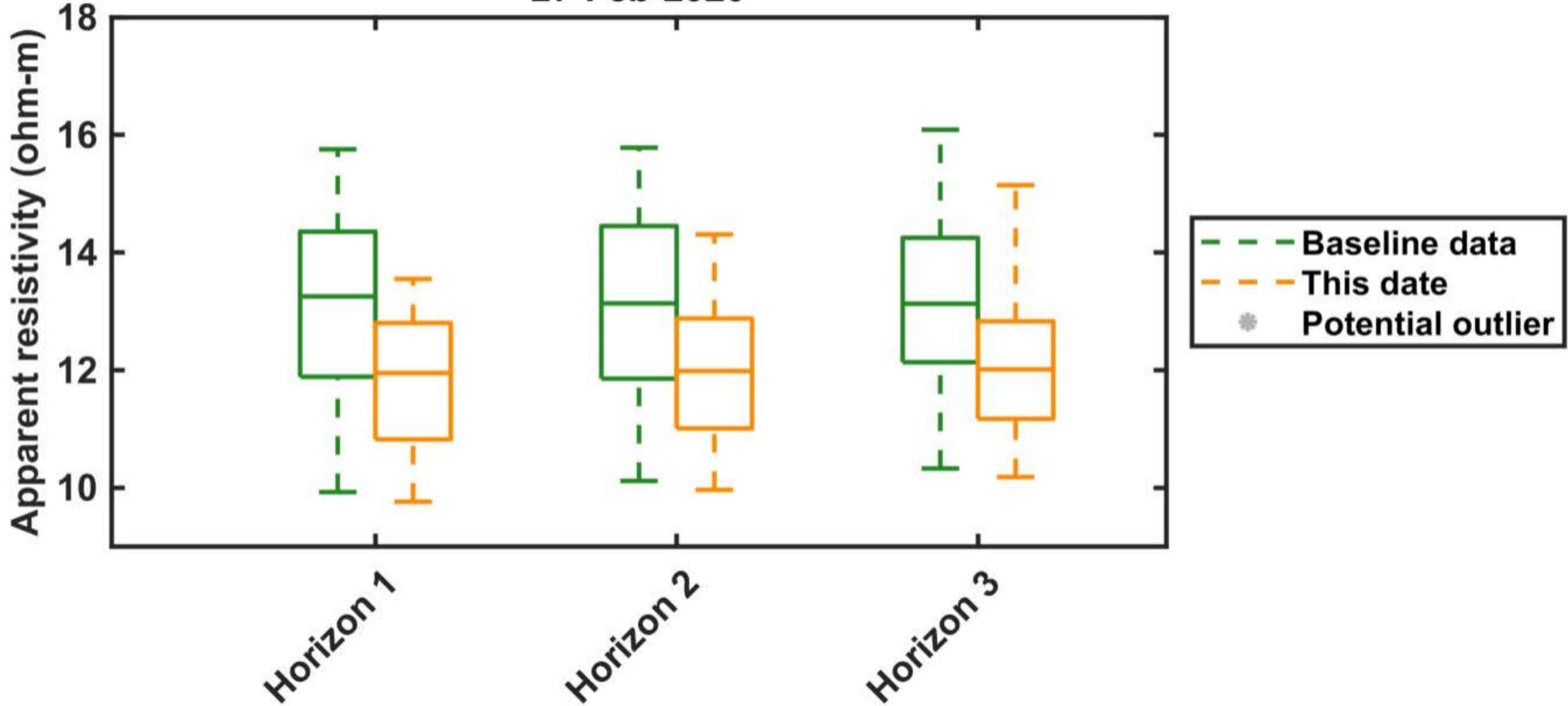
Florence electrical conductivity monitoring

18-Feb-2020



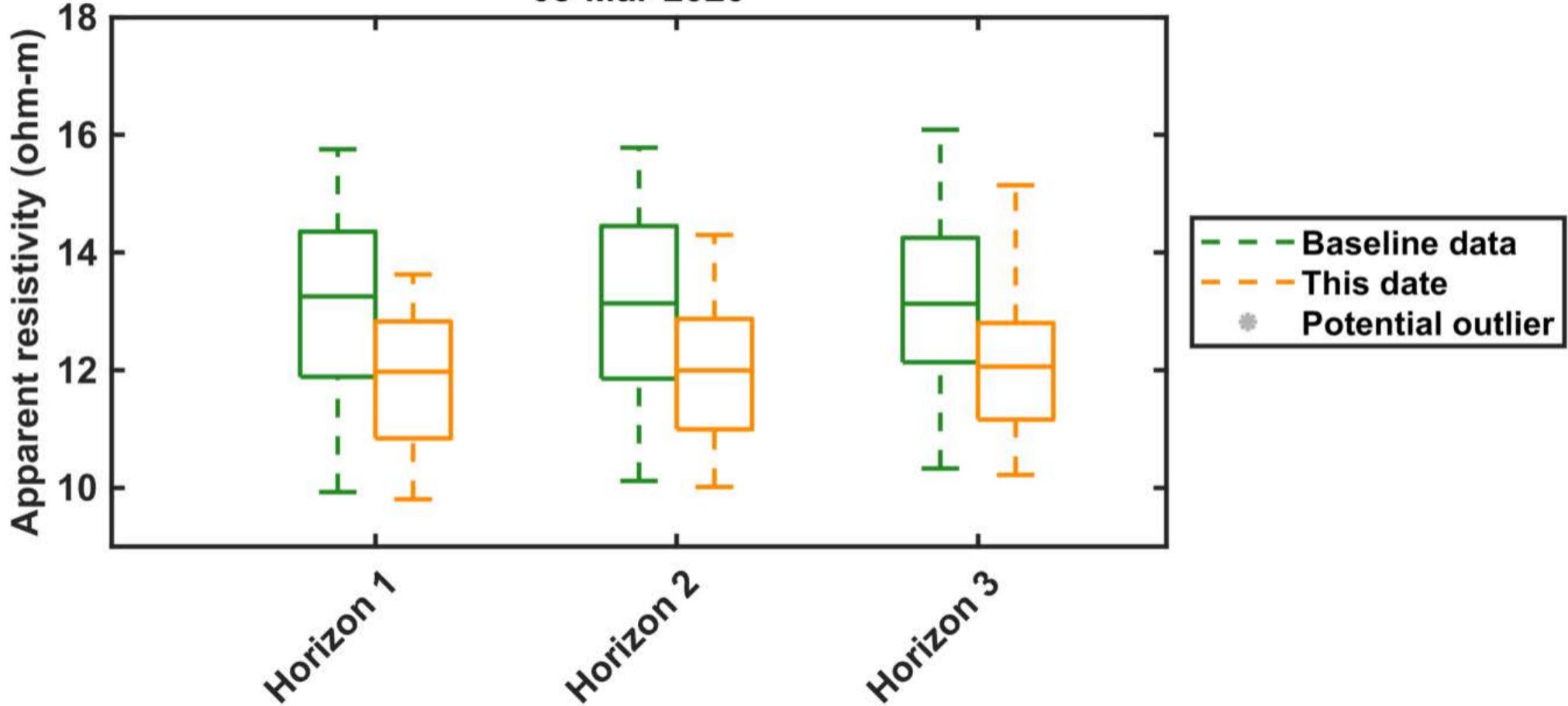
Florence electrical conductivity monitoring

27-Feb-2020



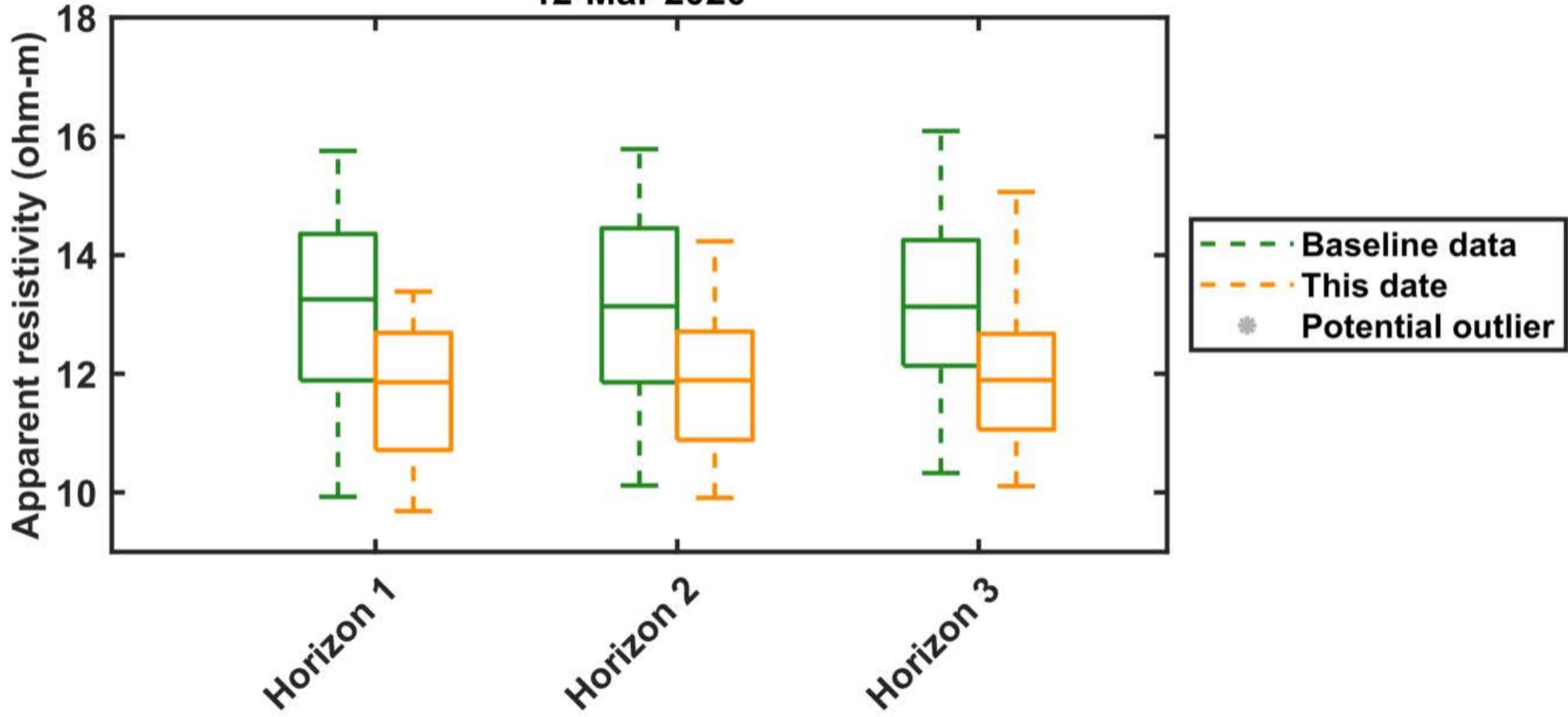
Florence electrical conductivity monitoring

05-Mar-2020



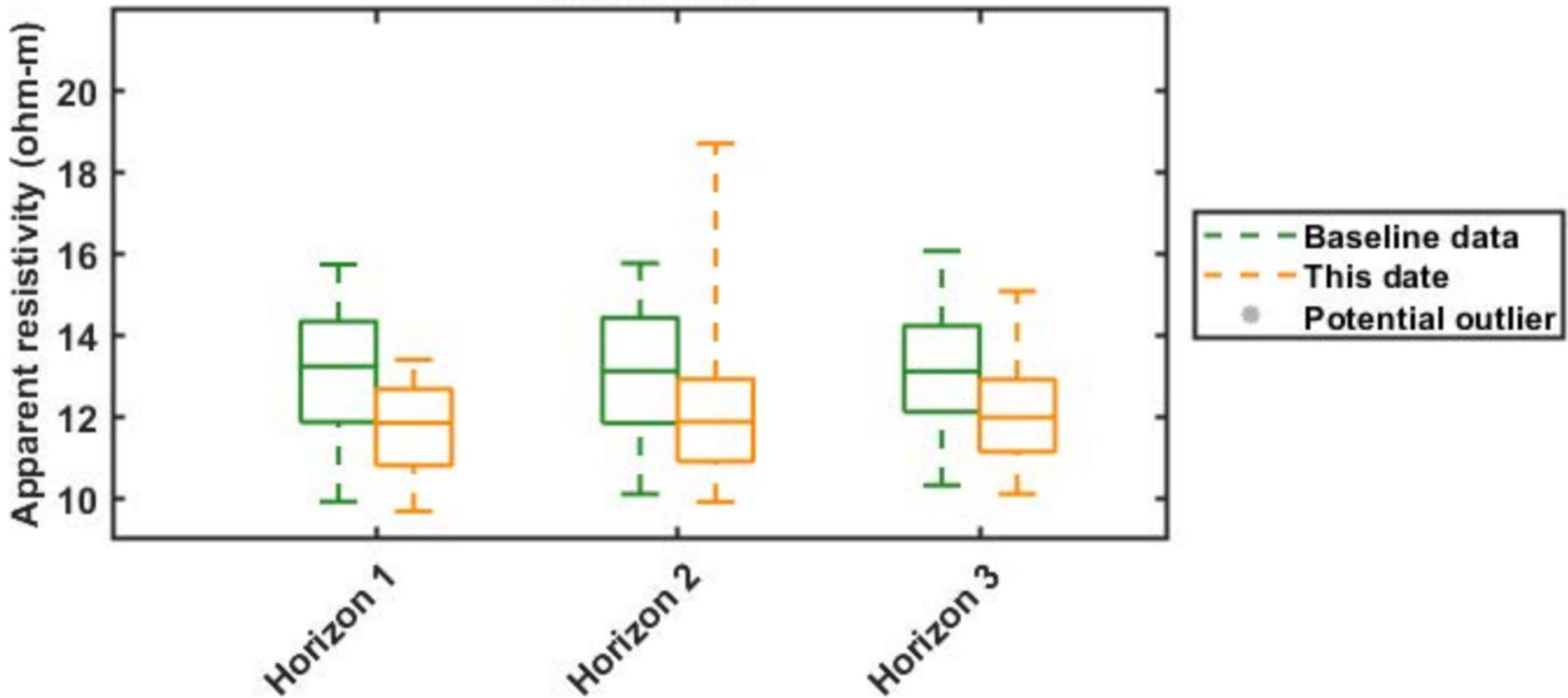
Florence electrical conductivity monitoring

12-Mar-2020



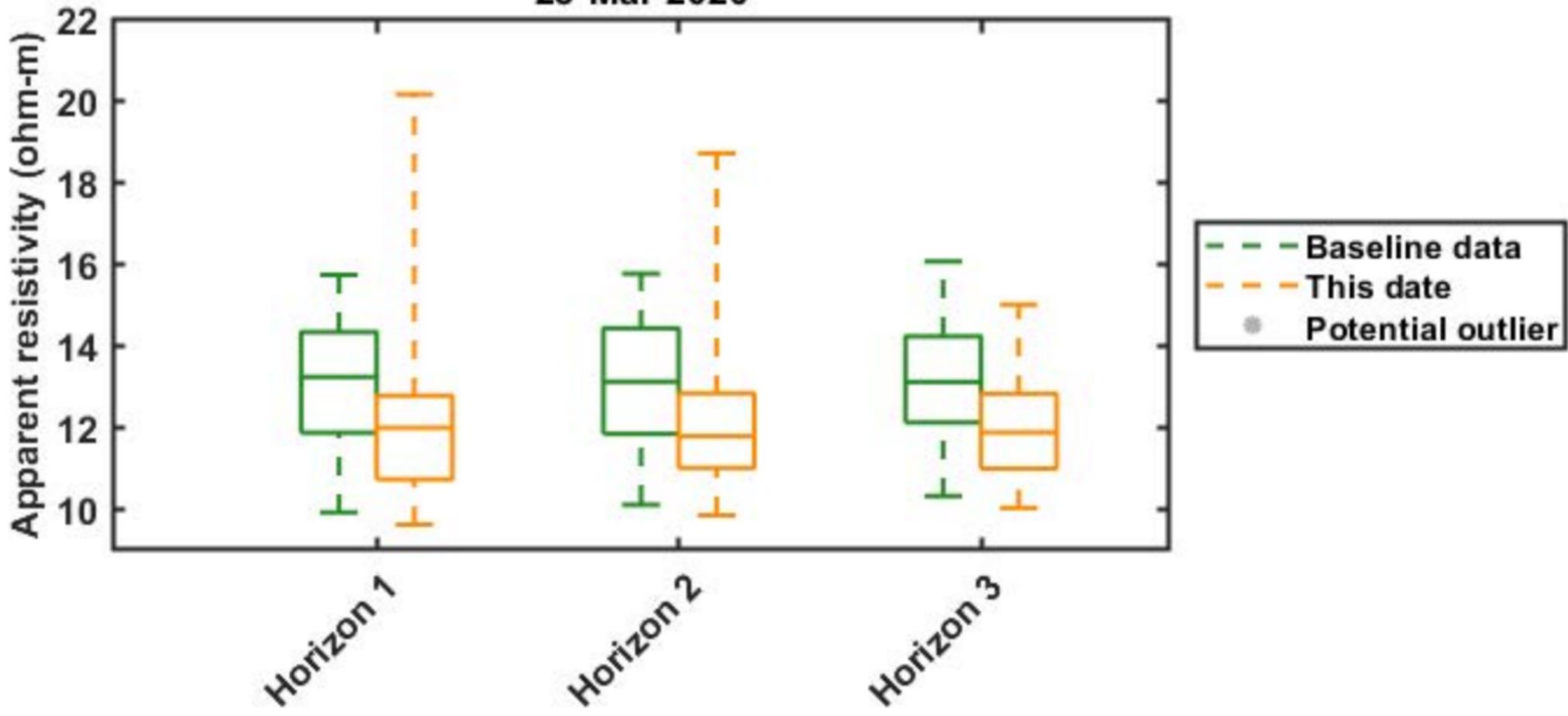
Florence electrical conductivity monitoring

19-Mar-2020



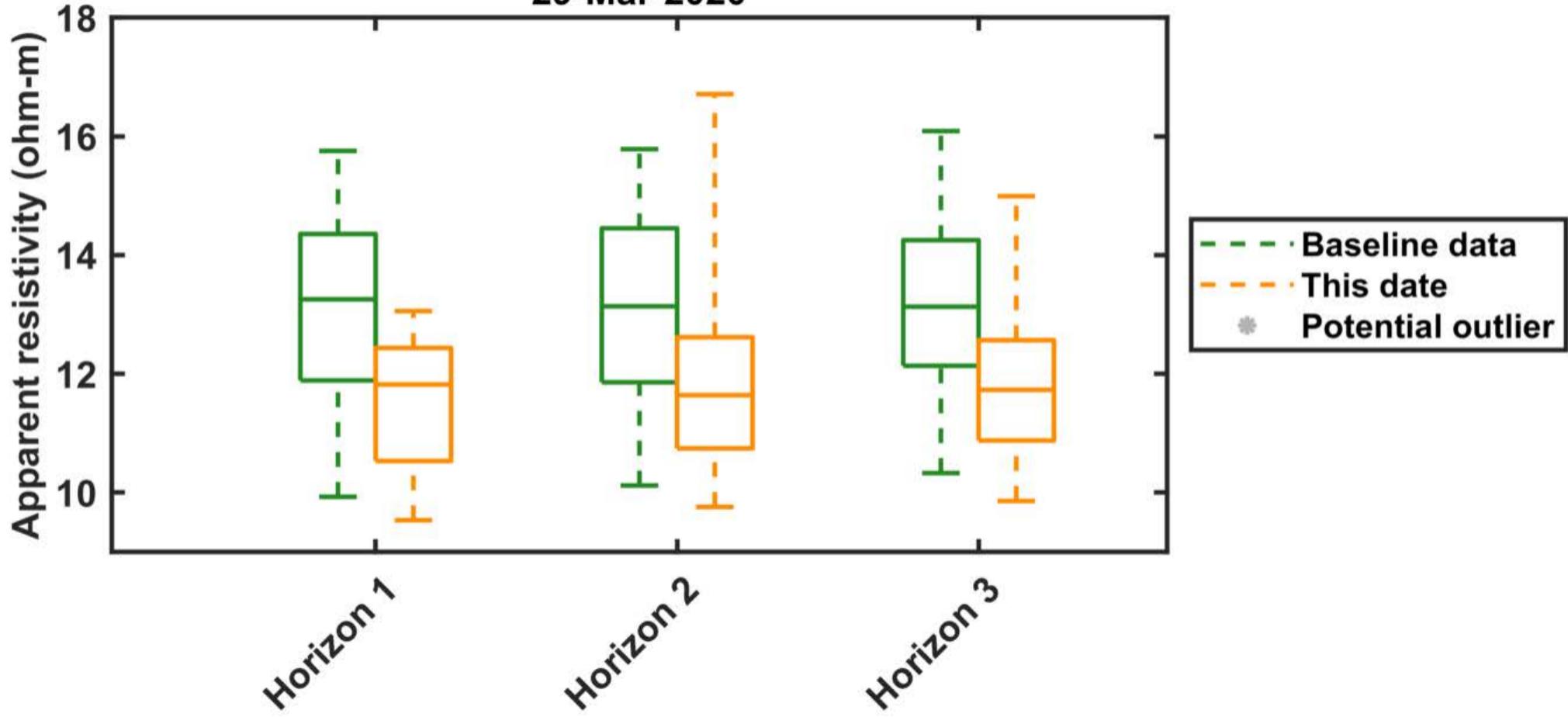
Florence electrical conductivity monitoring

25-Mar-2020



Florence electrical conductivity monitoring

29-Mar-2020

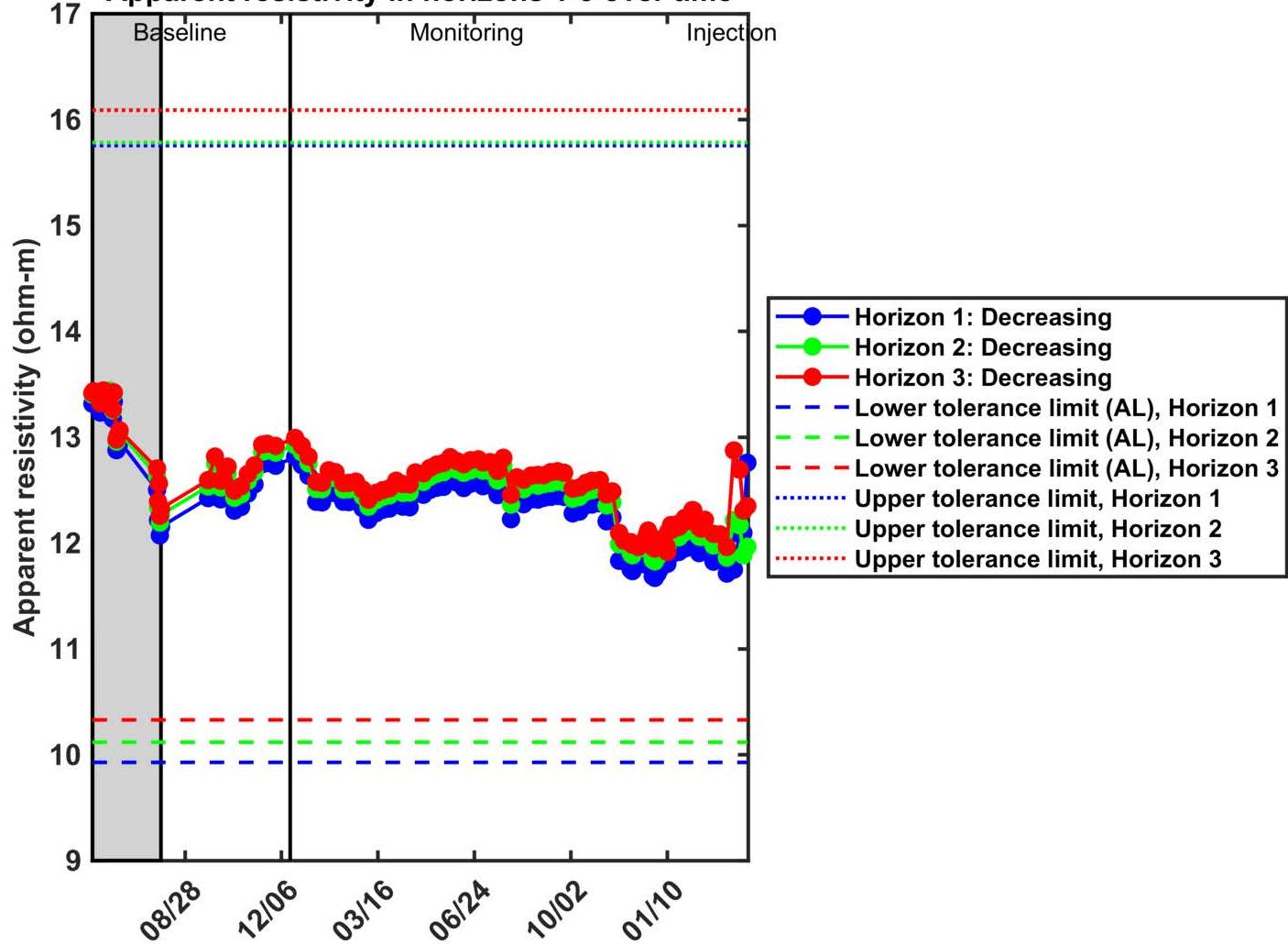


ATTACHMENT B

Summary Plot of Bulk Electrical Conductivity

Florence ambient electrical conductivity monitoring

Apparent resistivity in horizons 1-3 over time



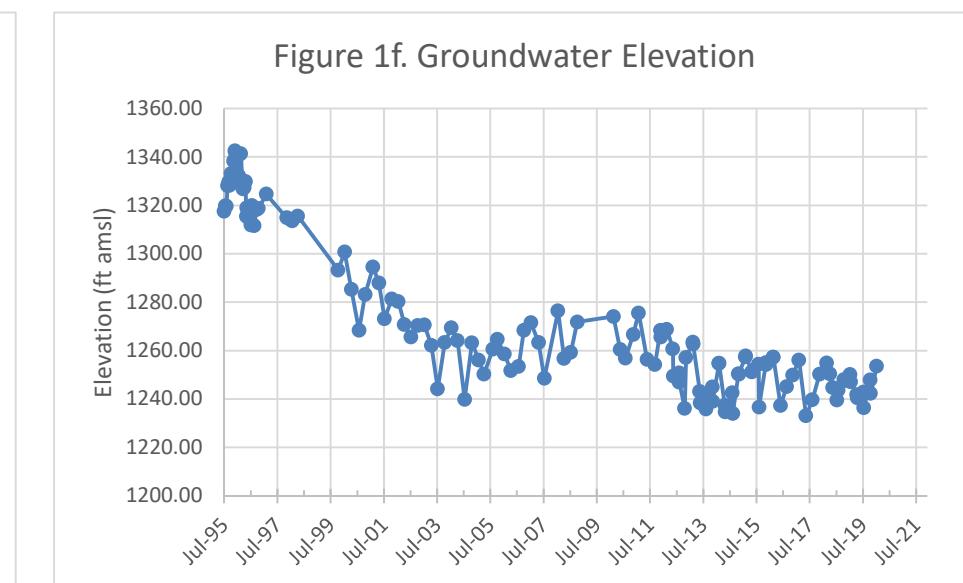
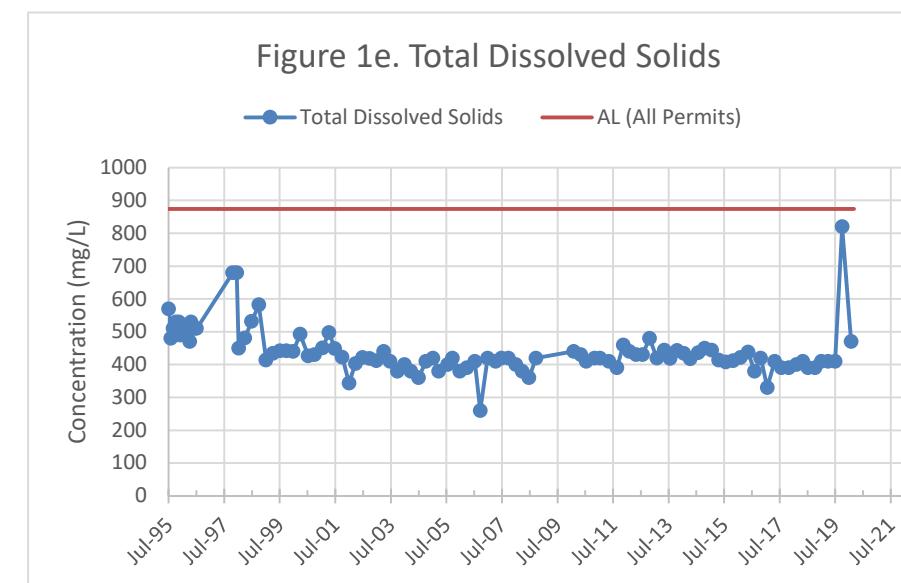
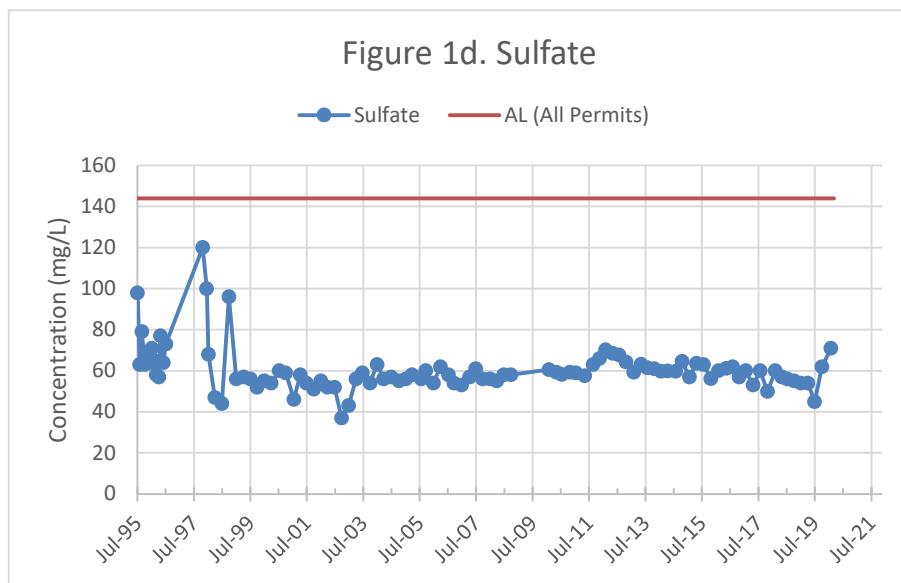
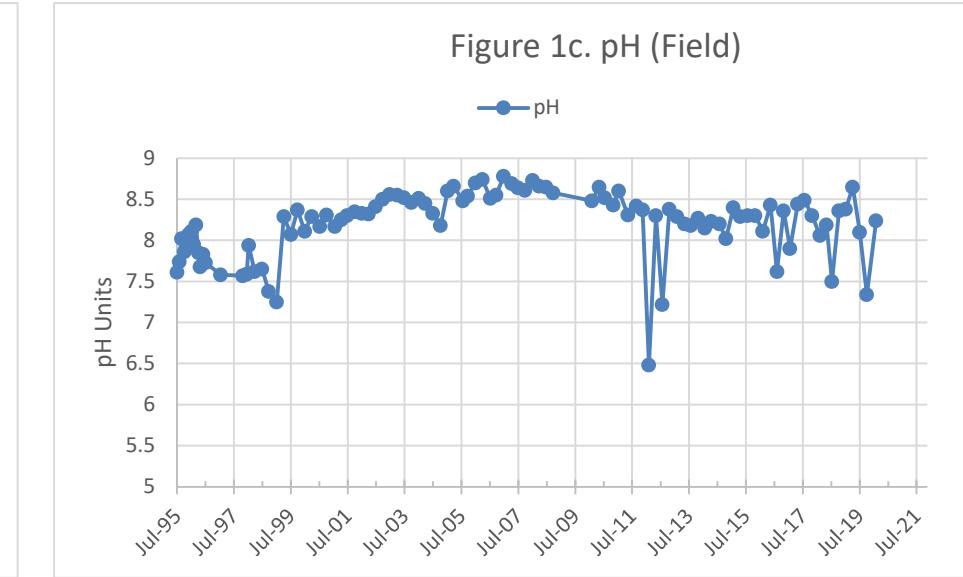
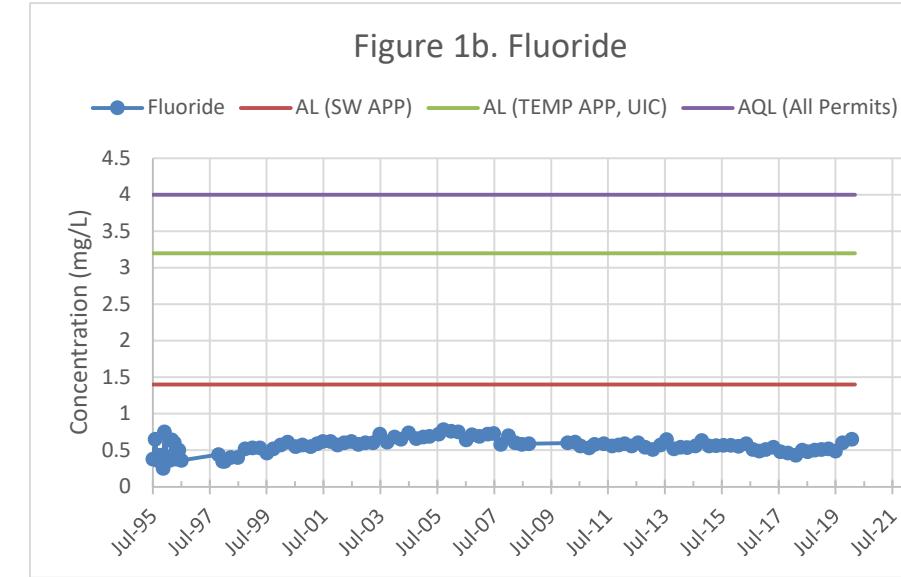
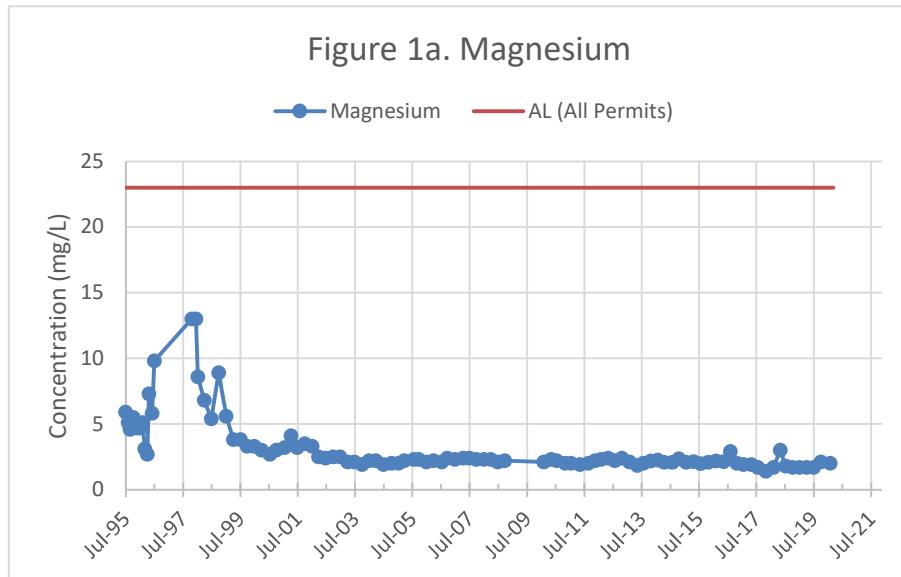
ATTACHMENT 6

- 6A. Quarterly Concentration Graphs**
- 6B. Well Details and Water Level Elevations**
- 6C. Groundwater Monitoring Summary**

ATTACHMENT 6A

Quarterly Concentration Graphs

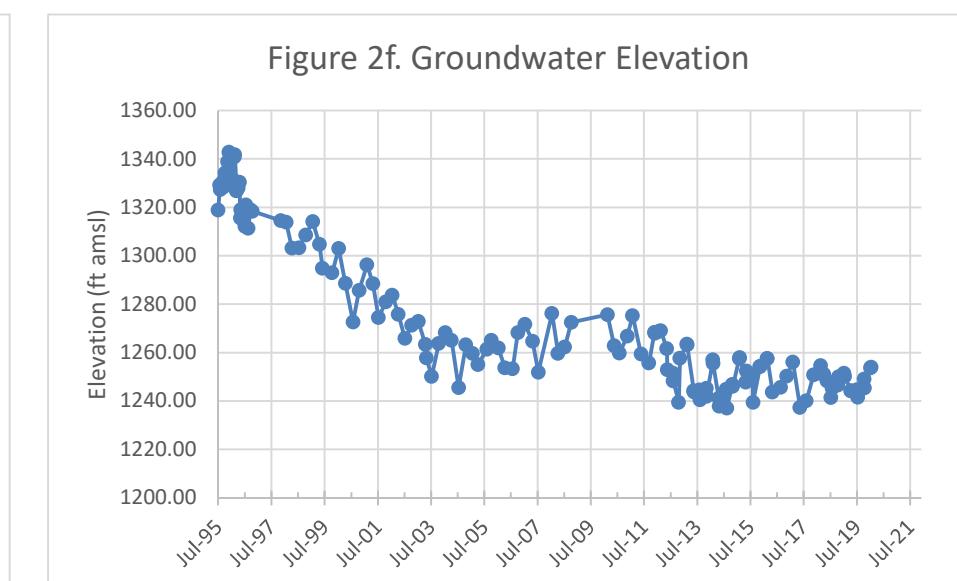
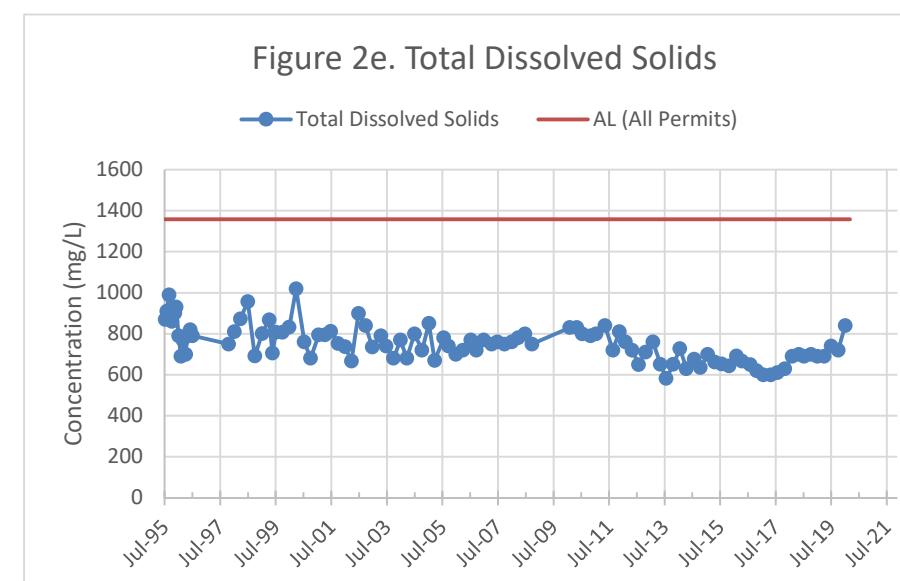
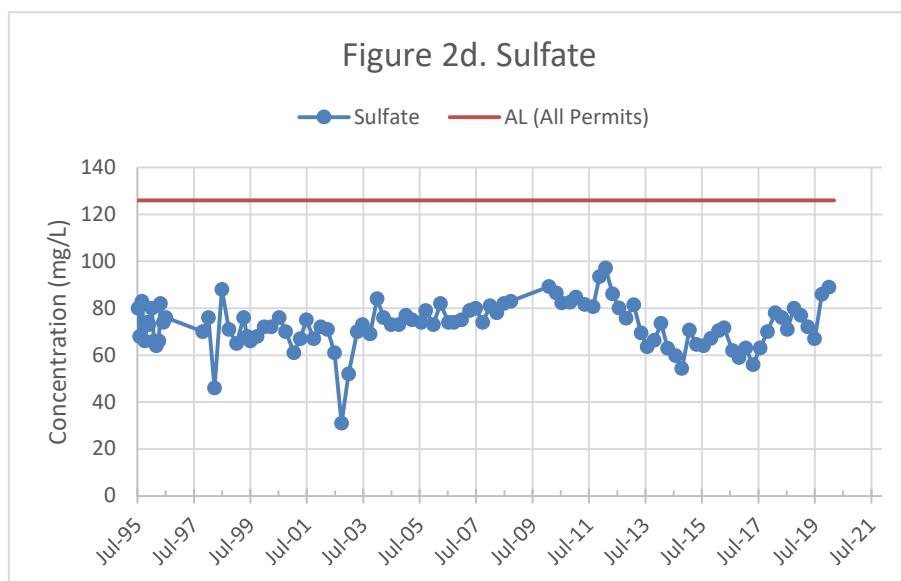
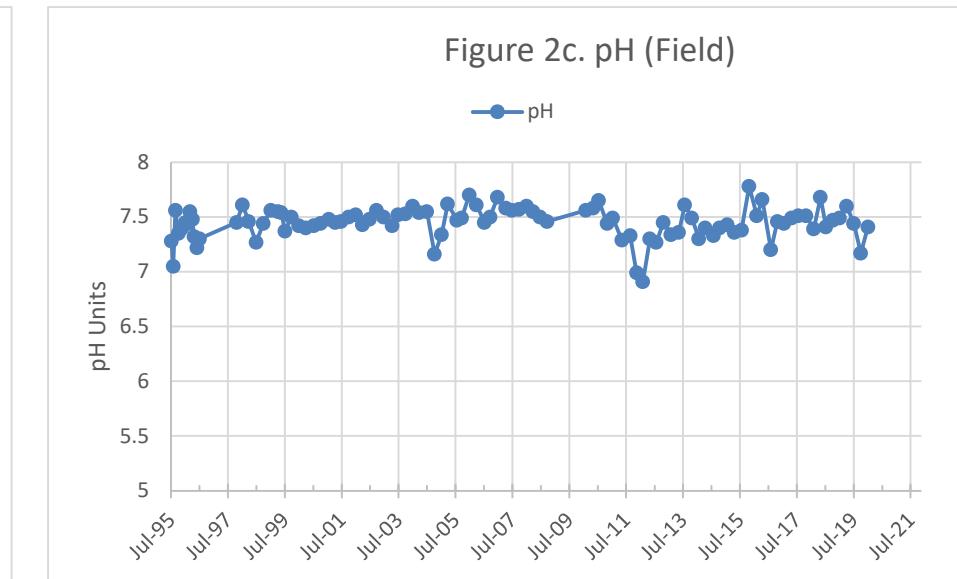
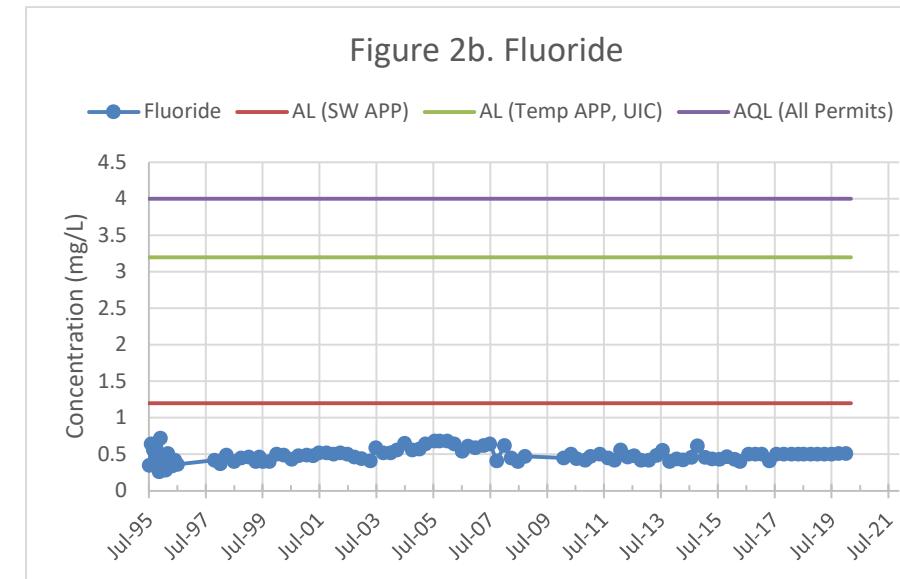
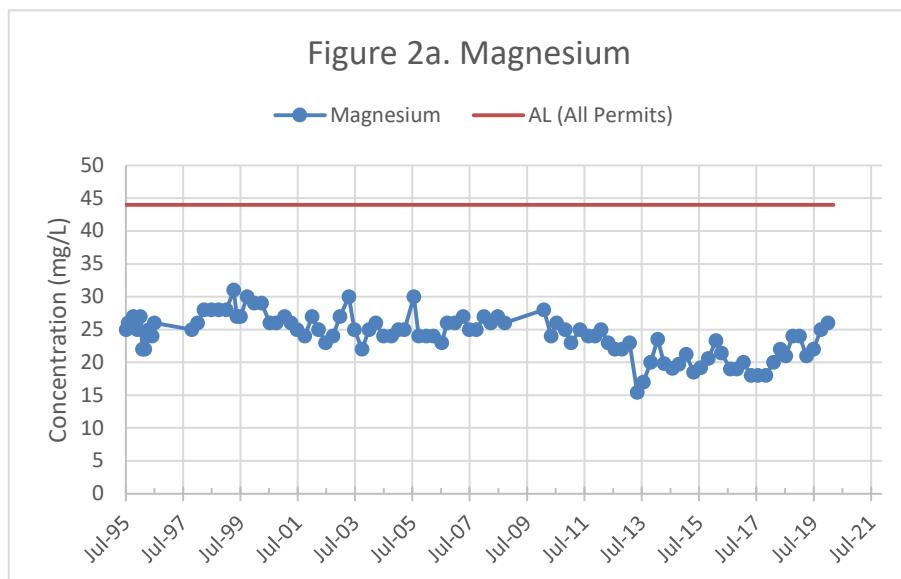
M14-GL QUARTERLY CONCENTRATION GRAPHS



Notes:

AL = Alert level
 APP = Aquifer Protection Permit
 AQL = Aquifer Quality Limit
 All Permits = SW APP, Temp ALL, and UIC
 SW APP = Sitewide APP No. P-101704
 Temp APP = Temporary APP No P-106360
 UIC = Underground Injection Control
 UIC = UIC Permit No. R9UIC-AZ3-FY11-1

M15-GU QUARTERLY CONCENTRATION GRAPHS



Notes:

AL = Alert level

APP = Aquifer Protection Permit

AQL = Aquifer Quality Limit

All Permits = SW APP, Temp ALL, and UIC

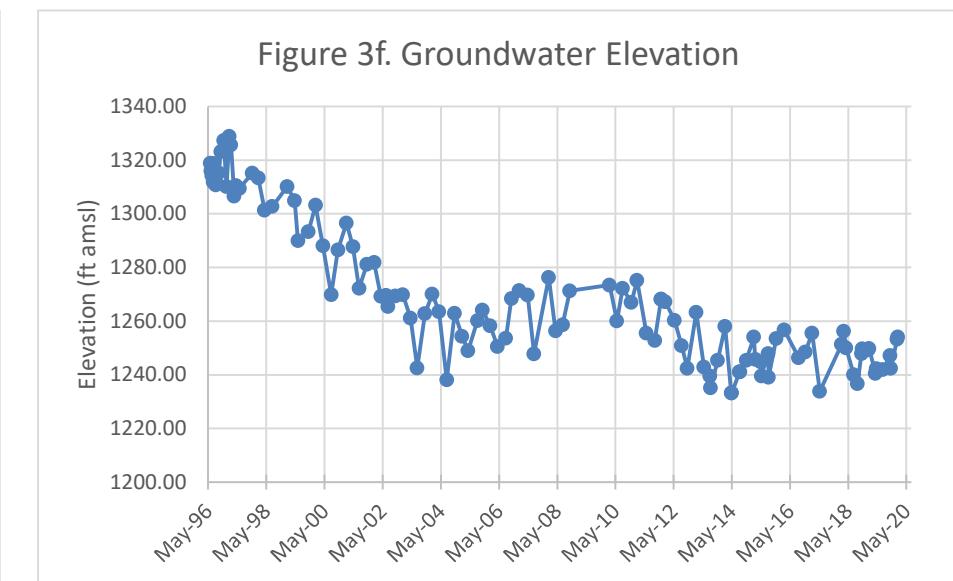
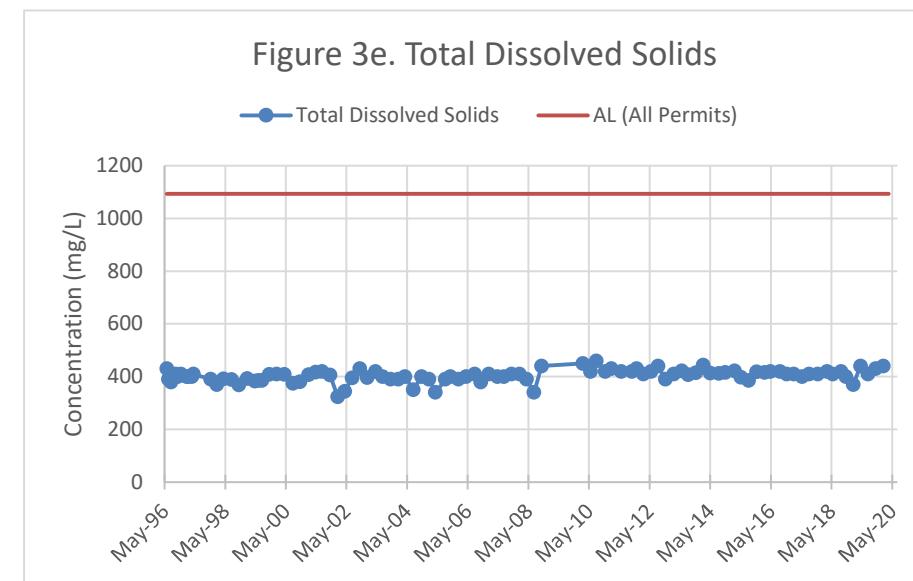
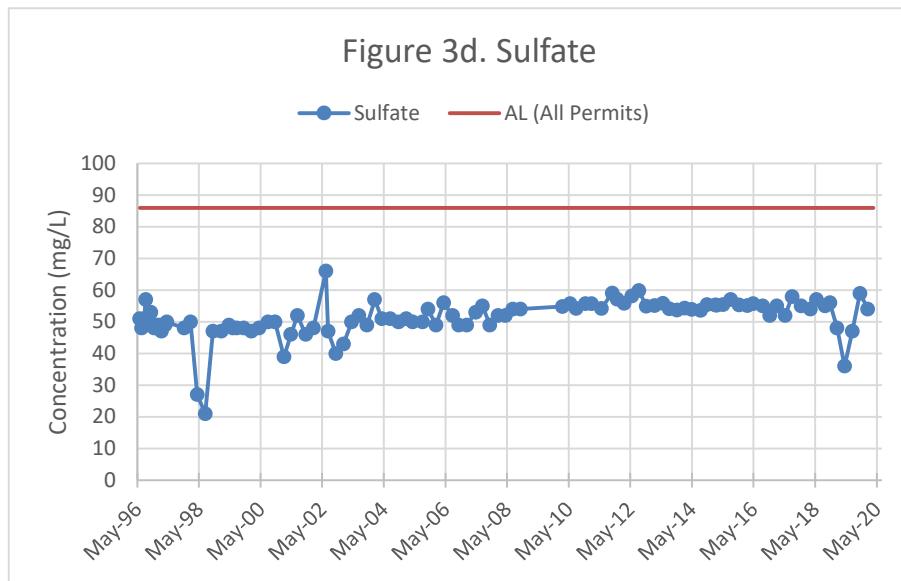
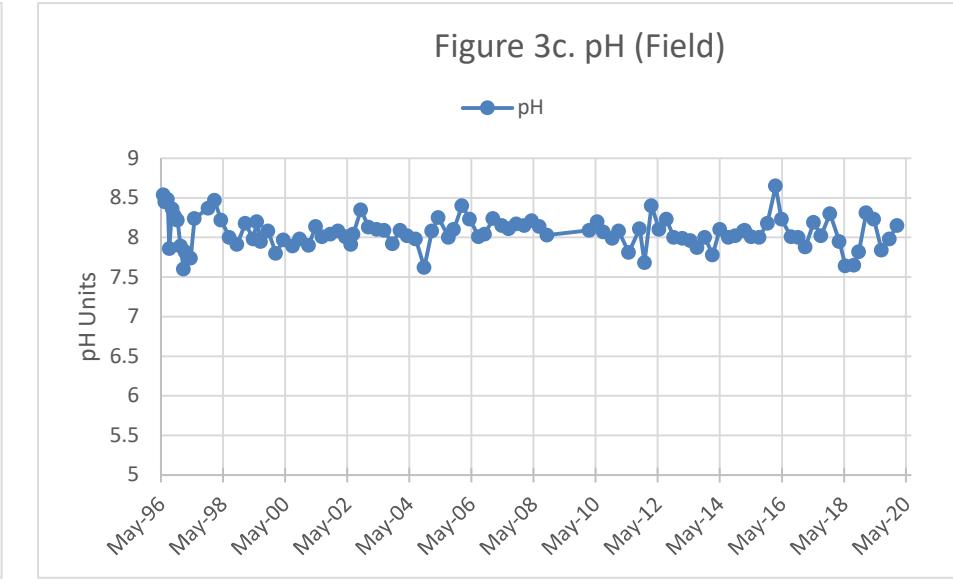
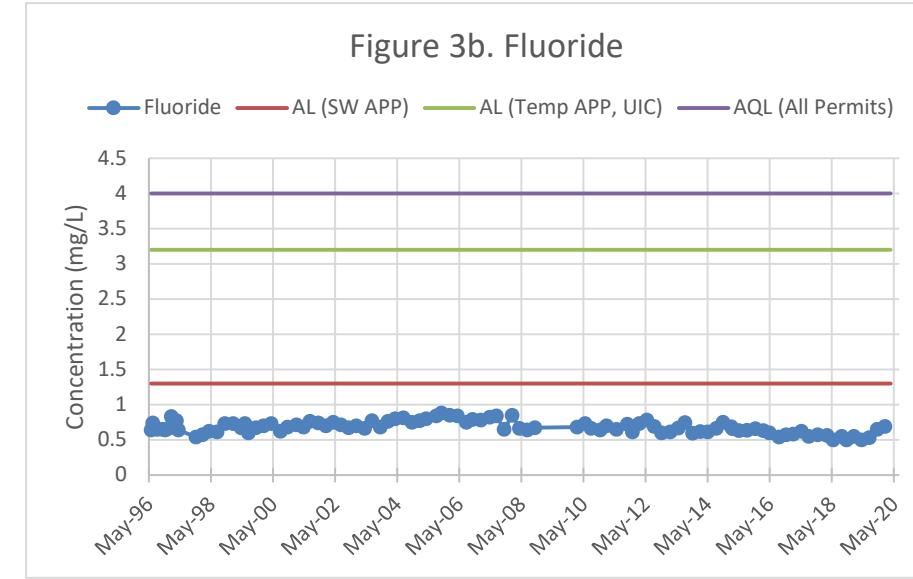
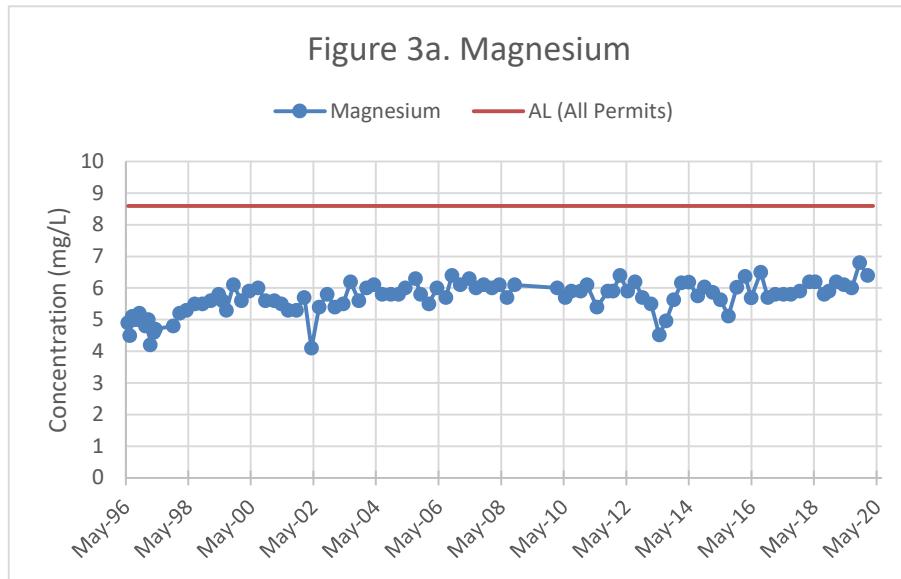
SW APP = Sitewide APP No. P-101704

Temp APP = Temporary APP No P-106360

UIC = Underground Injection Control

UIC = UIC Permit No. R9UIC-AZ3-FY11-1

M22-O QUARTERLY CONCENTRATION GRAPHS



Notes:

Historical outliers removed from graphs for visual representation, but are maintained in the dataset.

AL = Alert level

APP = Aquifer Protection Permit

AQL = Aquifer Quality Limit

All Permits = SW APP, Temp ALL, and UIC

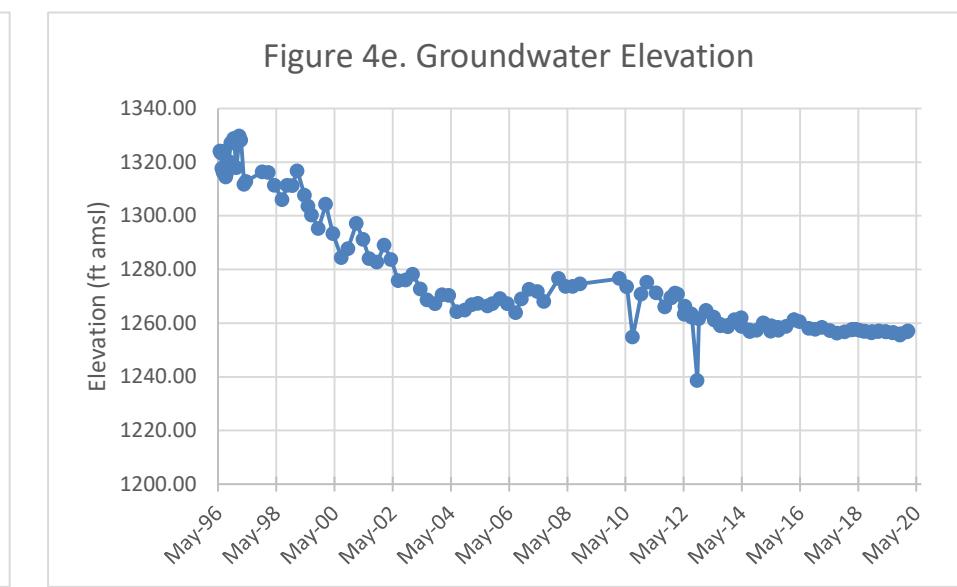
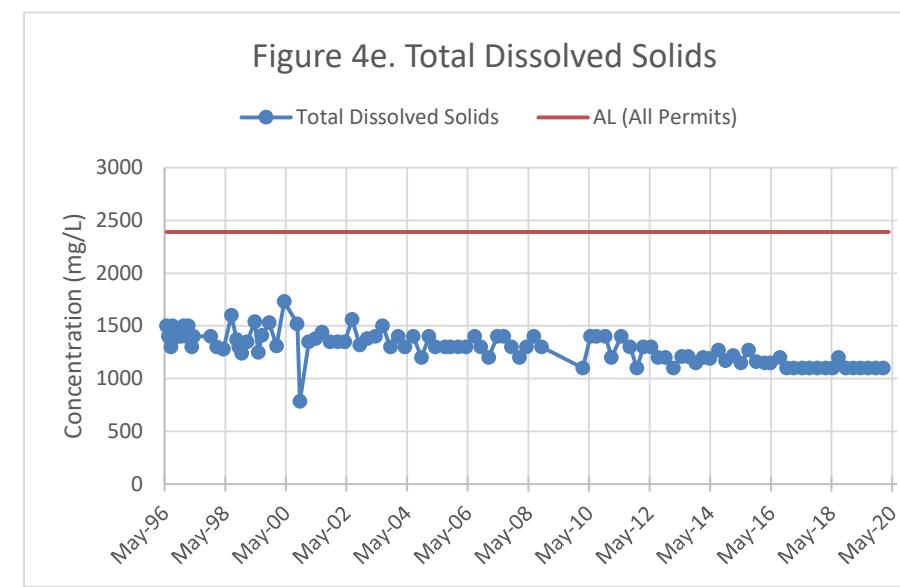
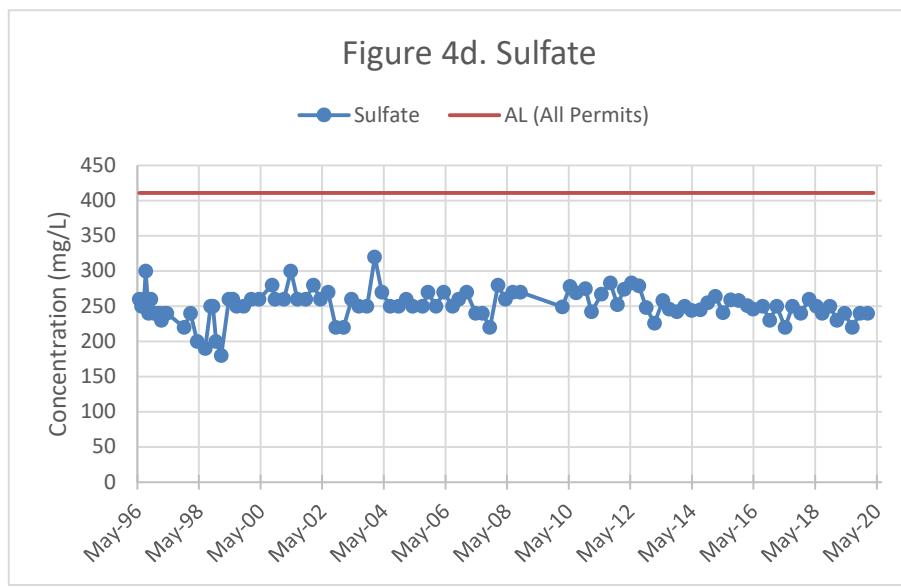
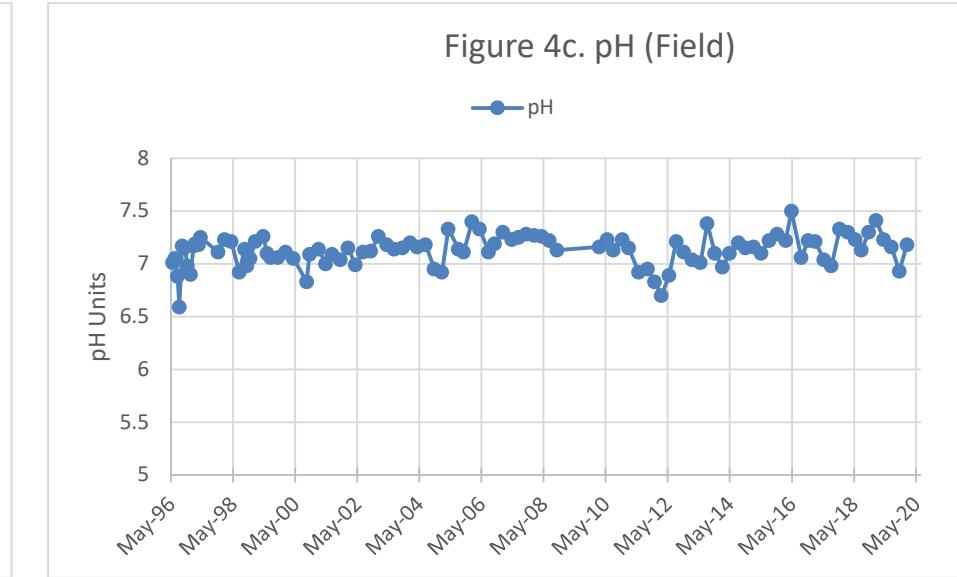
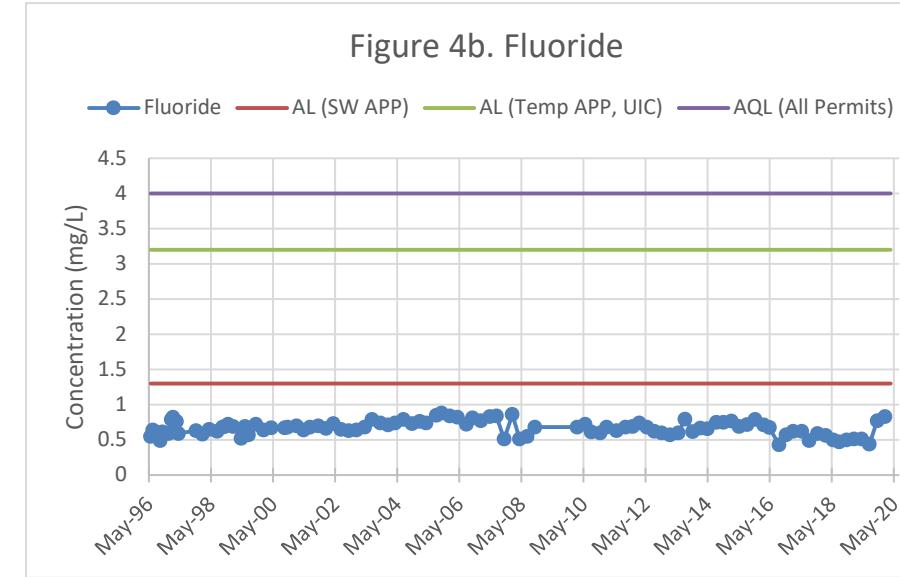
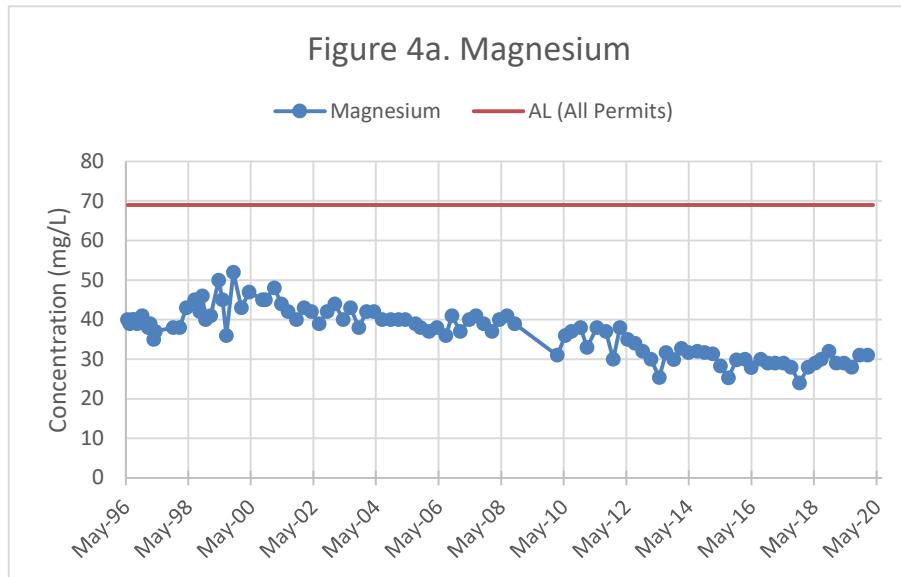
SW APP = Sitewide APP No. P-101704

Temp APP = Temporary APP No P-106360

UIC = Underground Injection Control

UIC = UIC Permit No. R9UIC-AZ3-FY11-1

M23-UBF QUARTERLY CONCENTRATION GRAPHS



Notes:

AL = Alert level

APP = Aquifer Protection Permit

AQL = Aquifer Quality Limit

All Permits = SW APP, Temp ALL, and UIC

SW APP = Sitewide APP No. P-101704

Temp APP = Temporary APP No P-106360

UIC = Underground Injection Control

UIC = UIC Permit No. R9UIC-AZ3-FY11-1

M52-UBF QUARTERLY CONCENTRATION GRAPHS

Figure 5a. Magnesium

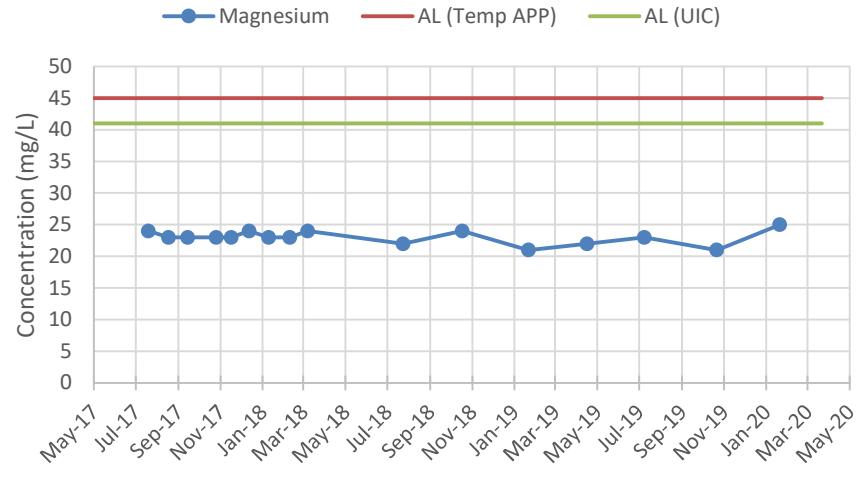


Figure 5b. Fluoride

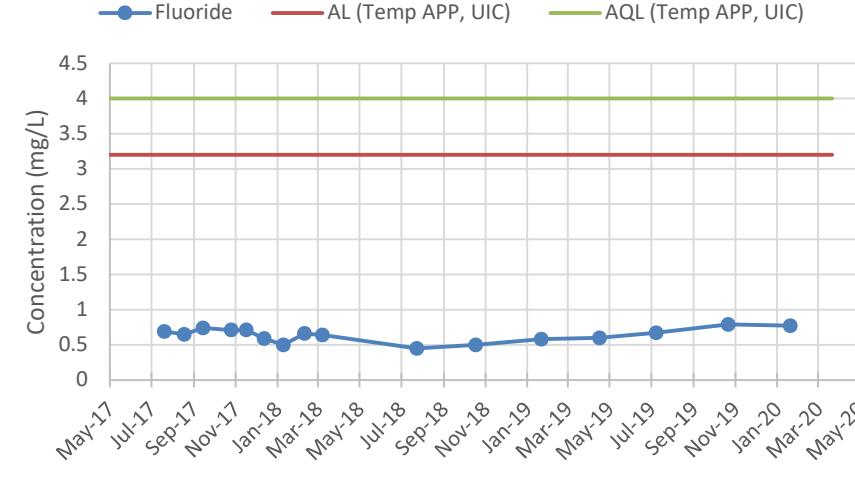


Figure 5c. pH (Field)

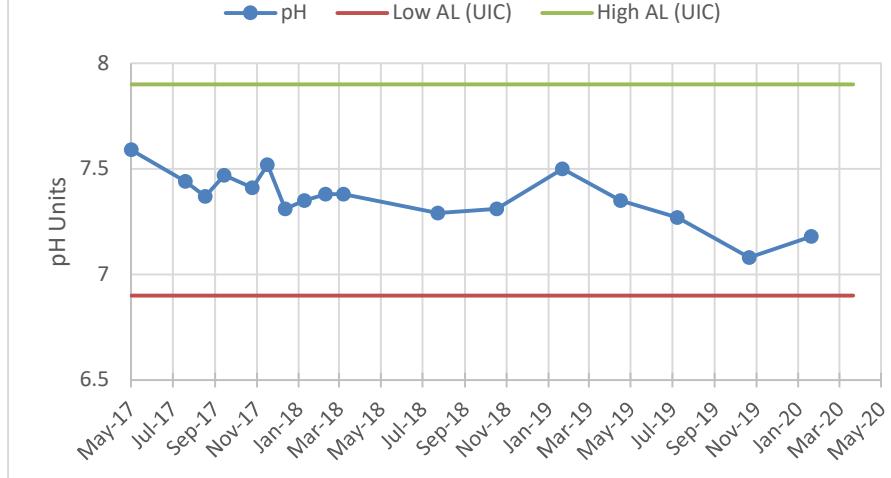


Figure 5d. Sulfate

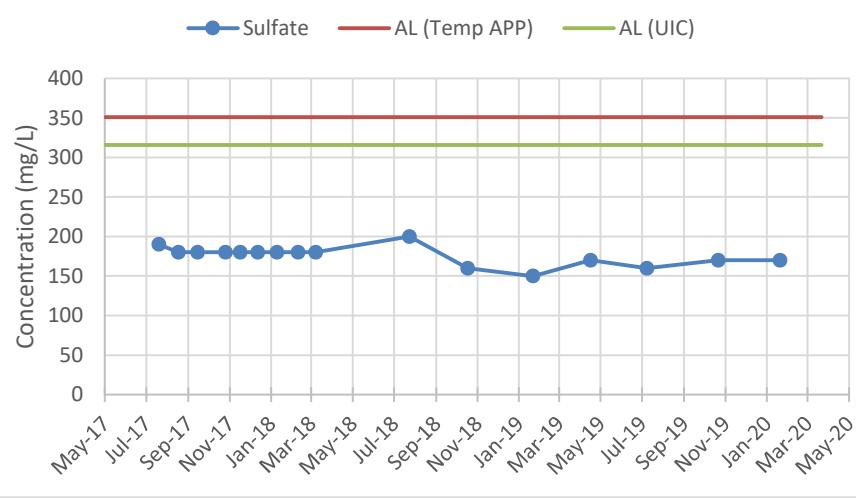


Figure 5e. Total Dissolved Solids

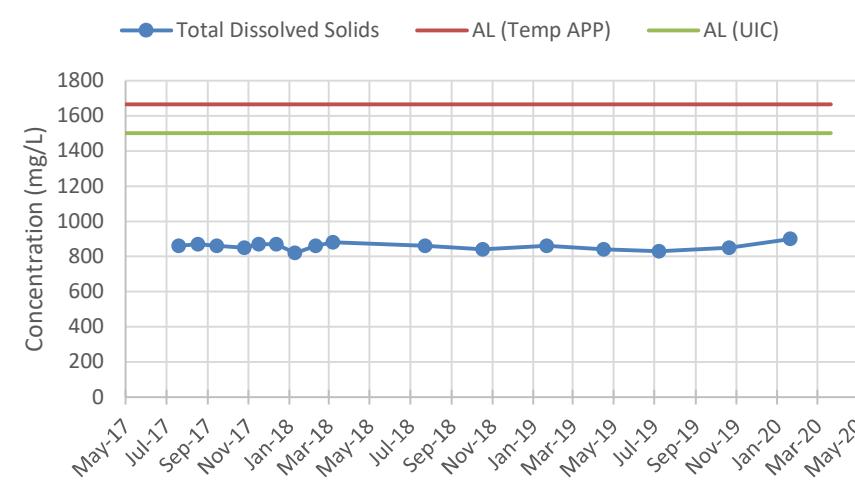
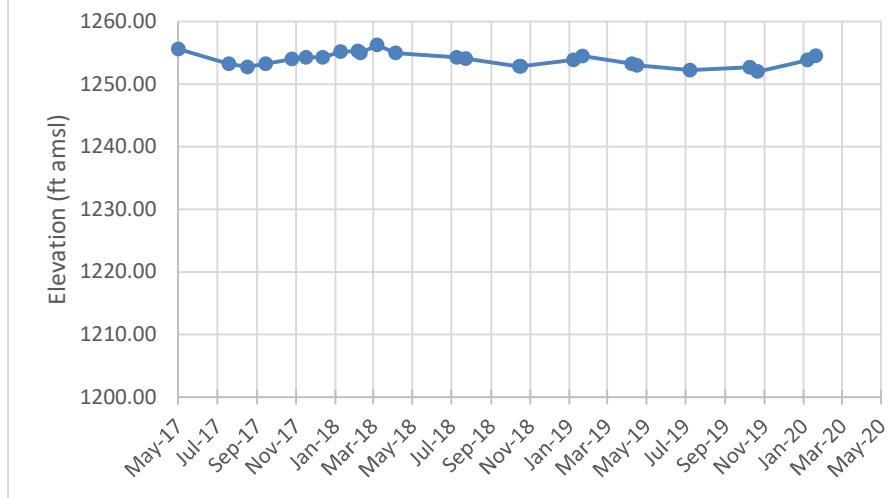


Figure 5f. Groundwater Elevation



Notes:

AL = Alert level

APP = Aquifer Protection Permit

AQL = Aquifer Quality Limit

Temp APP = Temporary APP No P-106360

UIC = Underground Injection Control

UIC = UIC Permit No. R9UIC-AZ3-FY11-1

M54-LBF QUARTERLY CONCENTRATION GRAPHS

Figure 6a. Magnesium

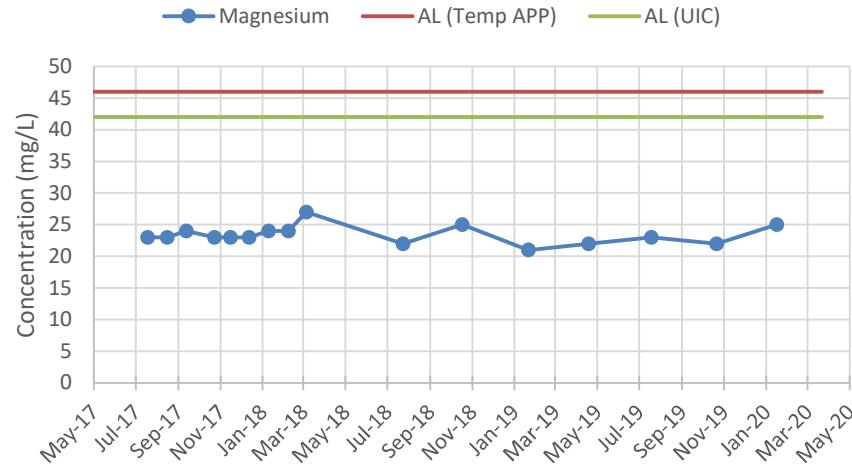


Figure 6b. Fluoride

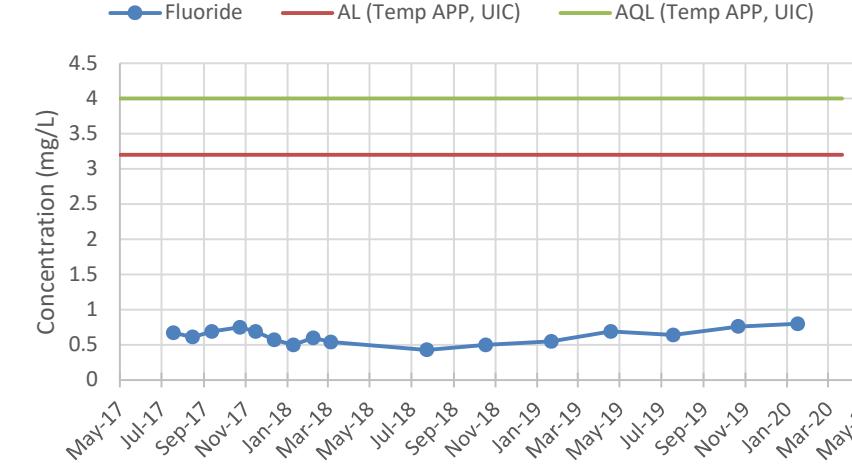


Figure 6c. pH (Field)

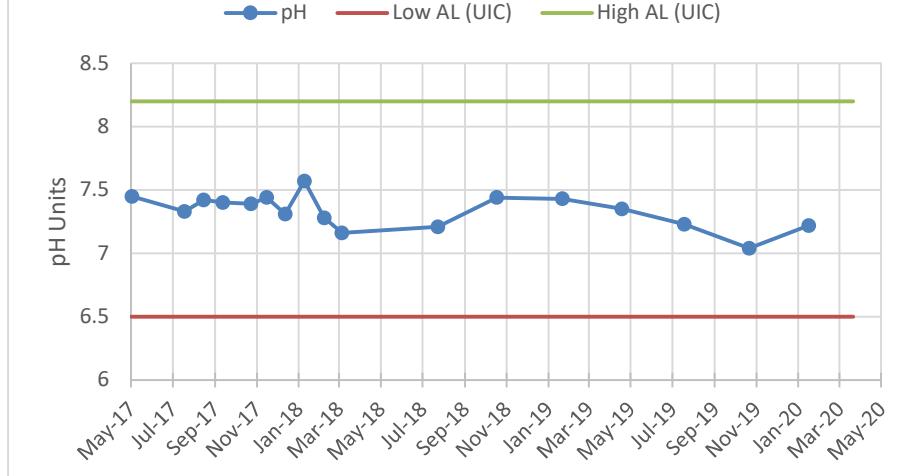


Figure 6d. Sulfate

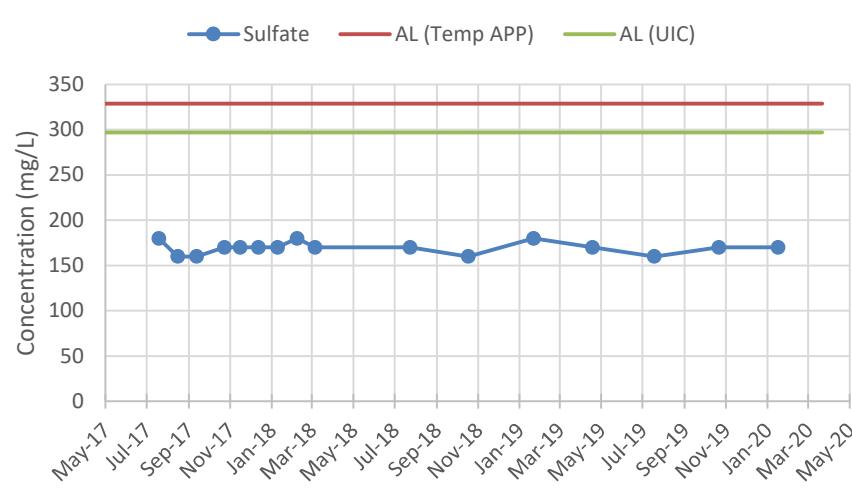


Figure 6e. Total Dissolved Solids

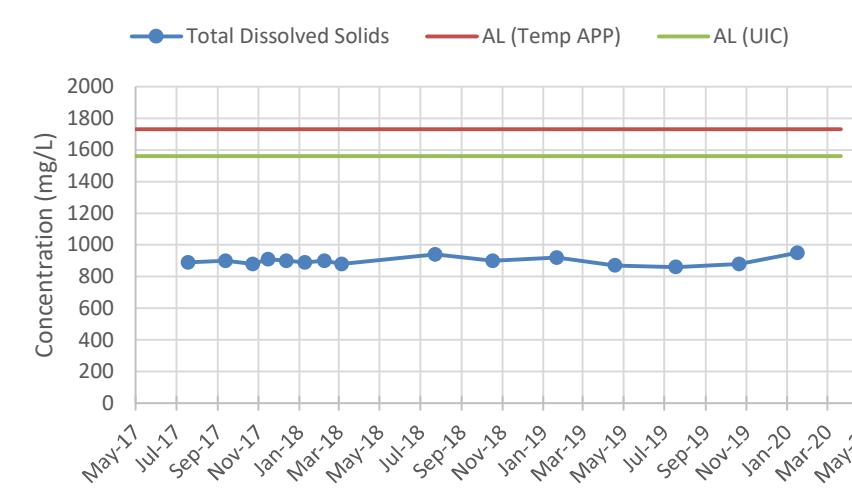
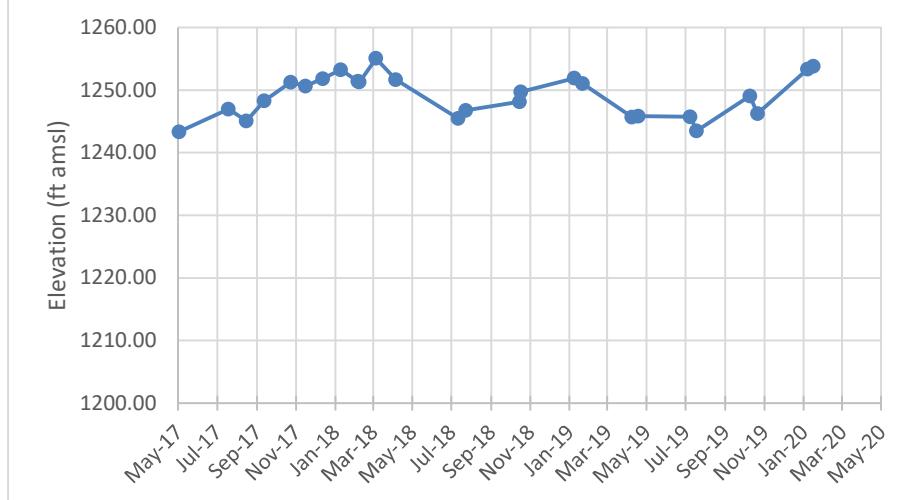


Figure 6f. Groundwater Elevation



Notes:

Historical outliers removed from graphs for visual representation, but are maintained in the dataset.

AL = Alert level

APP = Aquifer Protection Permit

AQL = Aquifer Quality Limit

Temp APP = Temporary APP No P-106360

UIC = Underground Injection Control

UIC = UIC Permit No. R9UIC-AZ3-FY11-1

M54-O QUARTERLY CONCENTRATION GRAPHS

Figure 7a. Magnesium

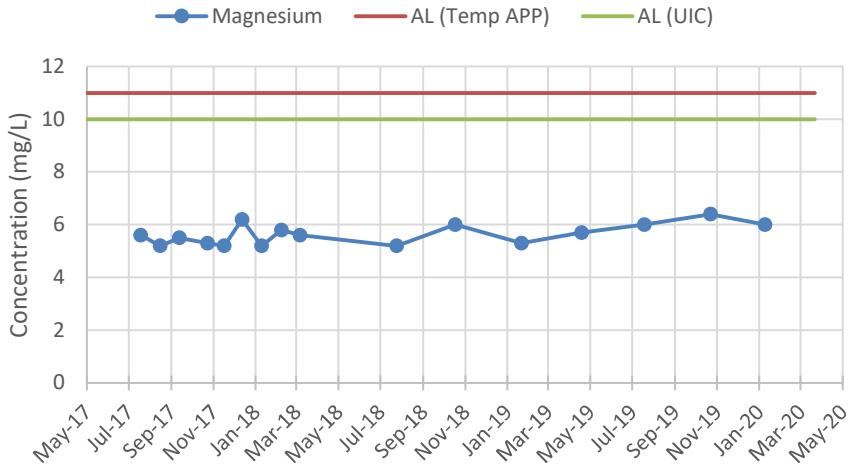


Figure 7b. Fluoride

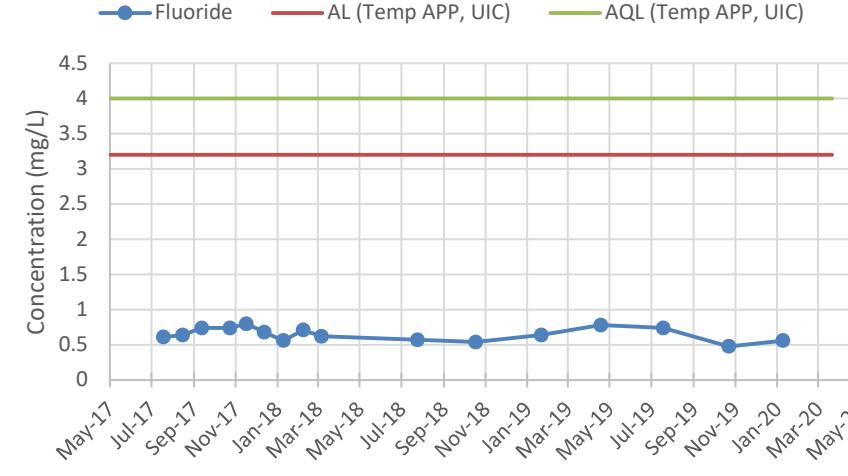


Figure 7c. pH (Field)

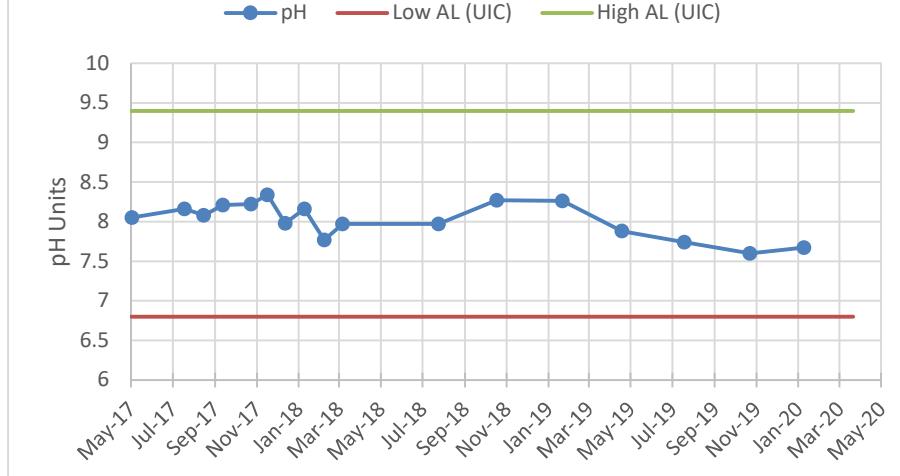


Figure 7d. Sulfate

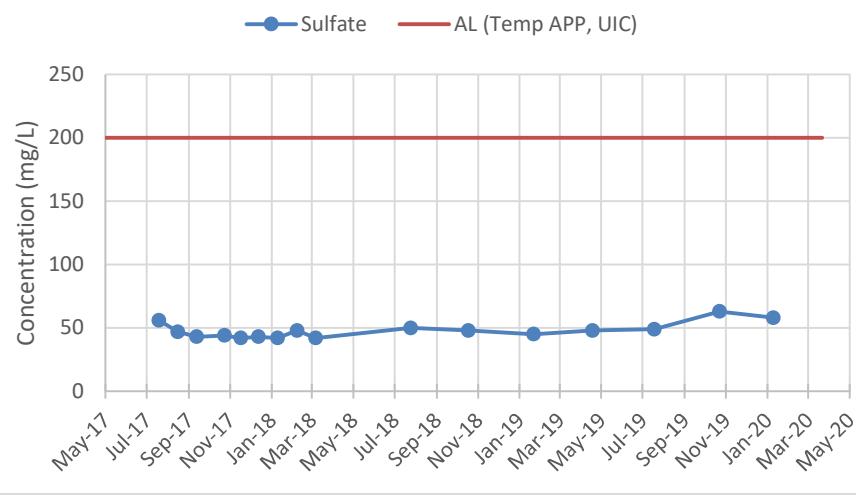


Figure 7e. Total Dissolved Solids

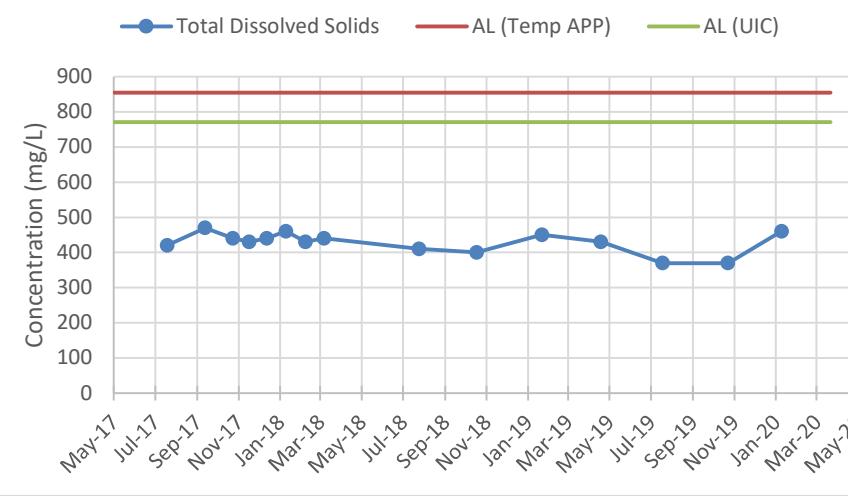
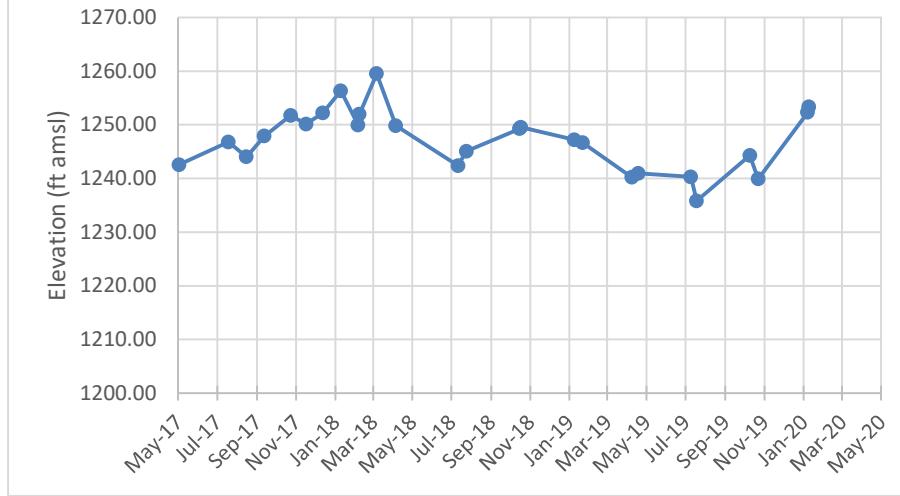


Figure 7f. Groundwater Elevation



Notes:

AL = Alert level

APP = Aquifer Protection Permit

AQL = Aquifer Quality Limit

Temp APP = Temporary APP No P-106360

UIC = Underground Injection Control

UIC = UIC Permit No. R9UIC-AZ3-FY11-1

M55-UBF QUARTERLY CONCENTRATION GRAPHS

Figure 8a. Magnesium

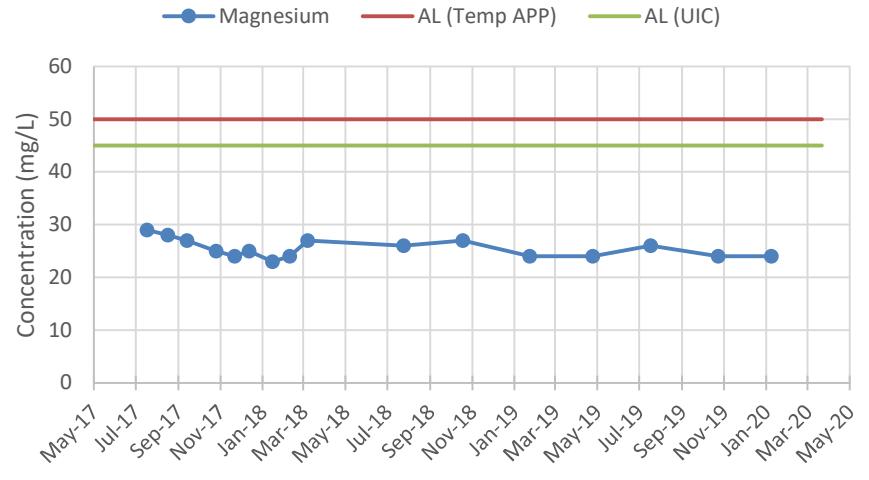


Figure 8b. Fluoride

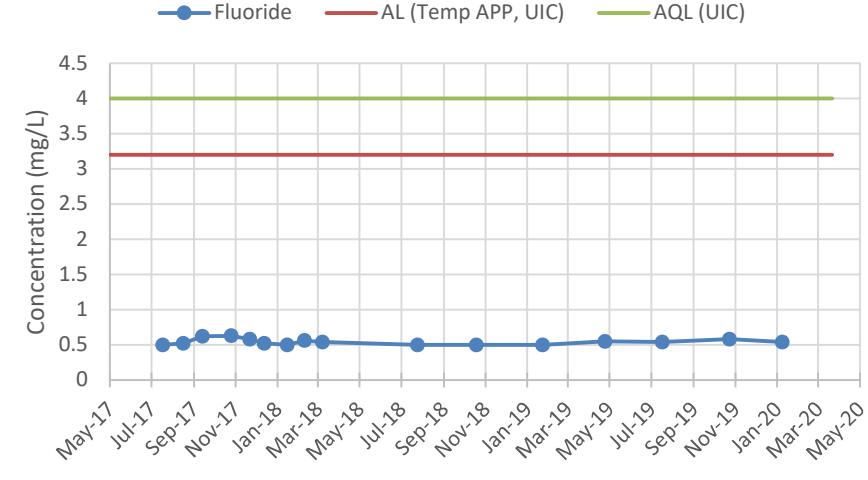


Figure 8c. pH (Field)

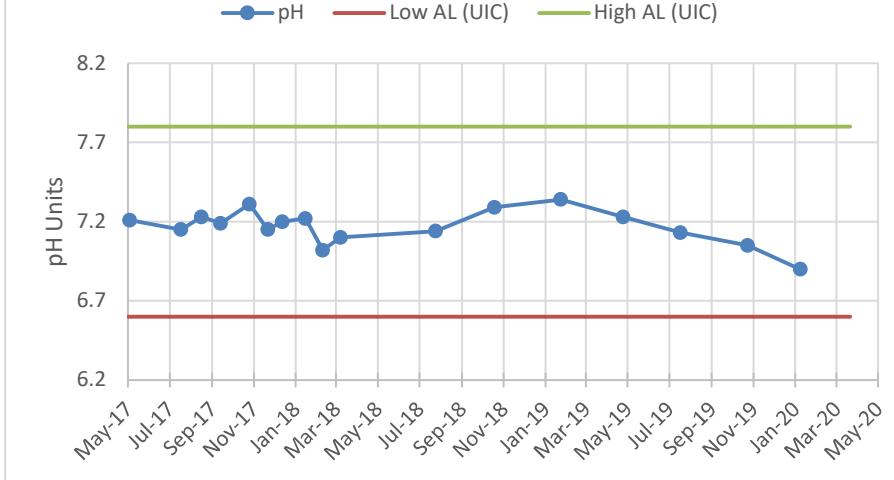


Figure 8d. Sulfate

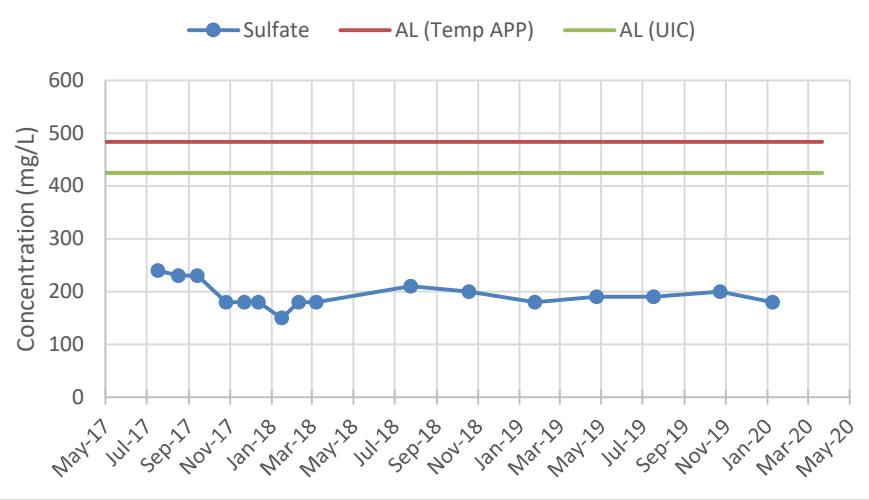


Figure 8e. Total Dissolved Solids

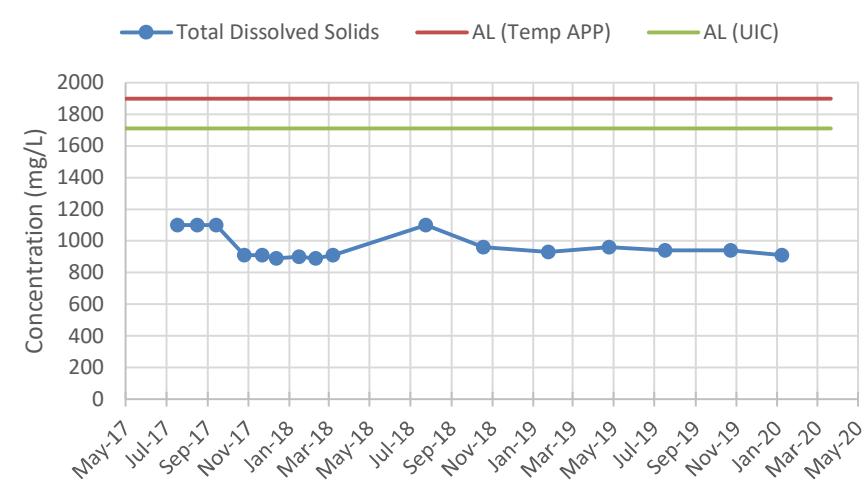
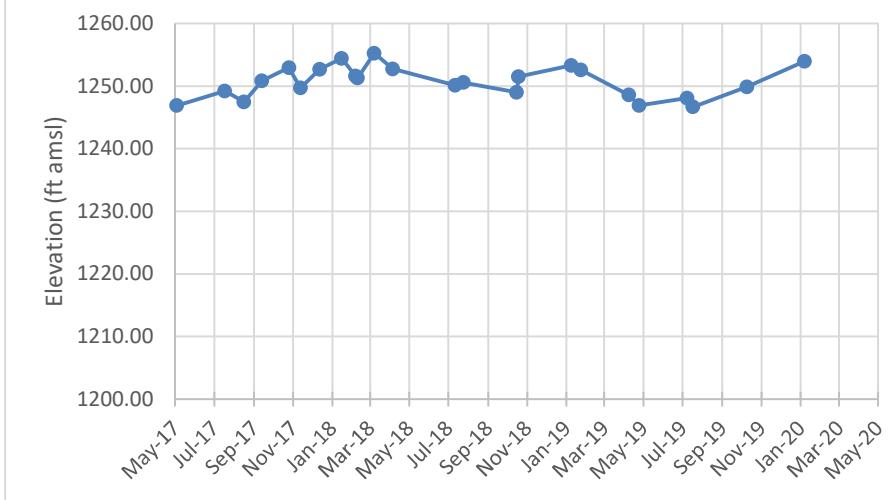


Figure 8f. Groundwater Elevation



Notes:

AL = Alert level

APP = Aquifer Protection Permit

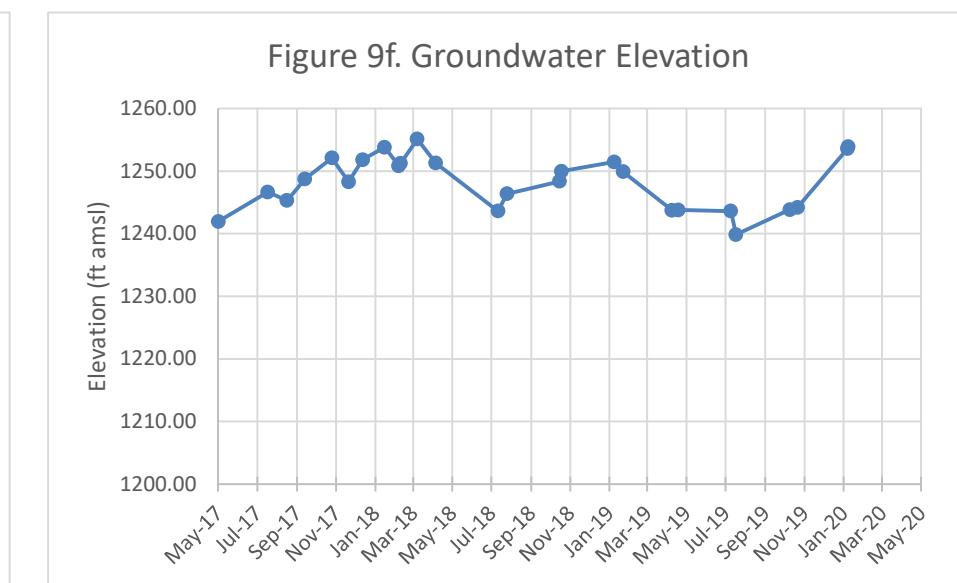
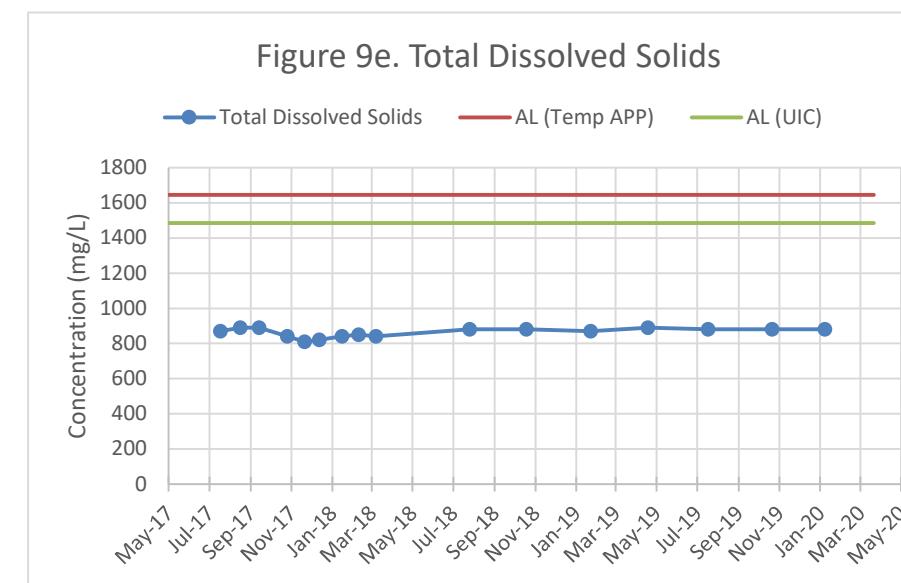
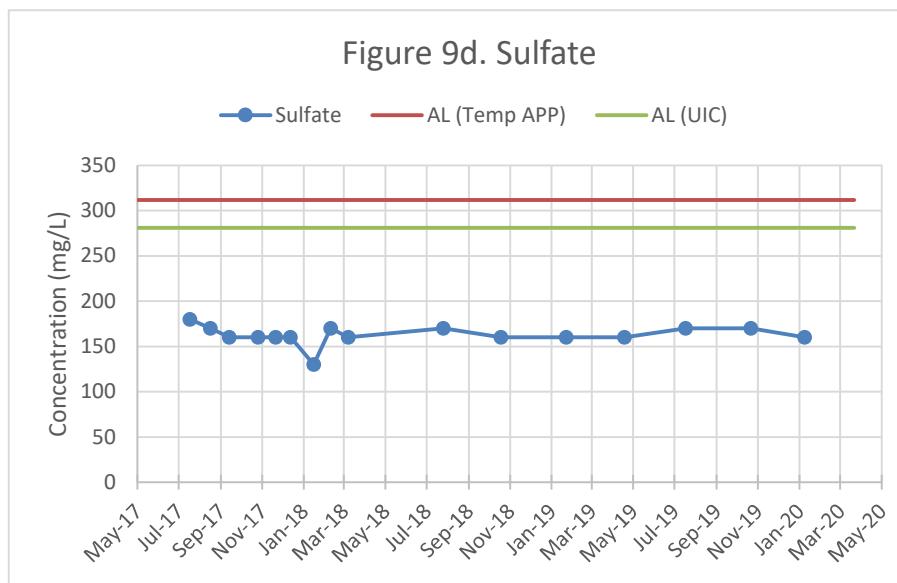
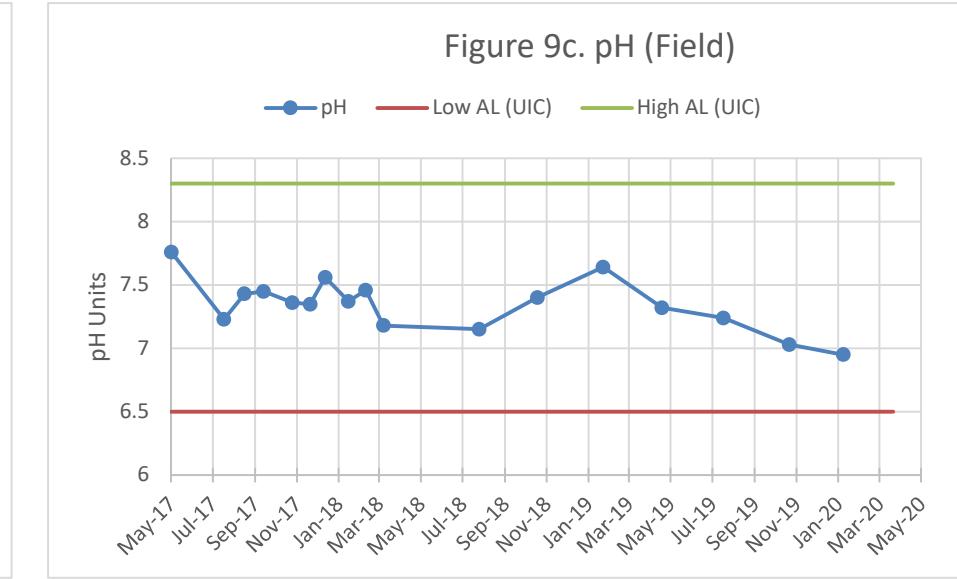
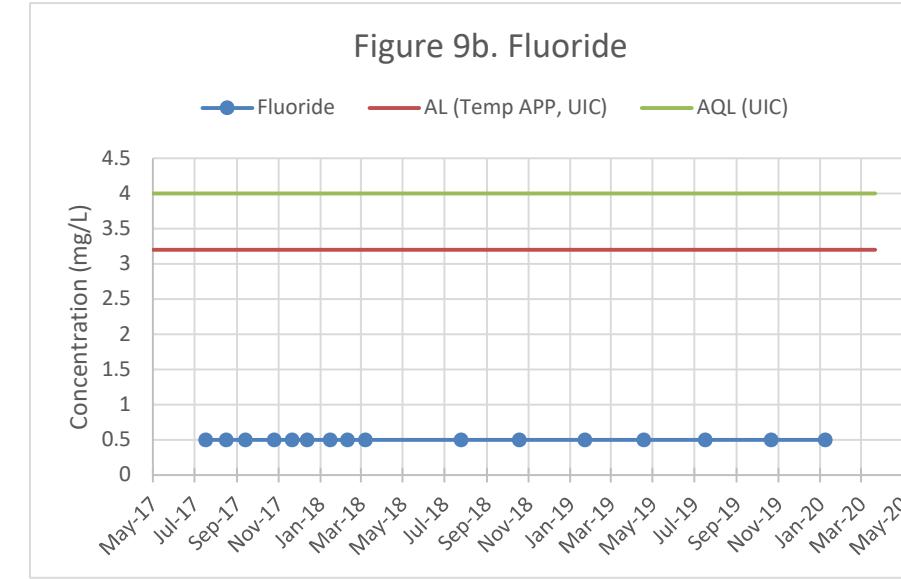
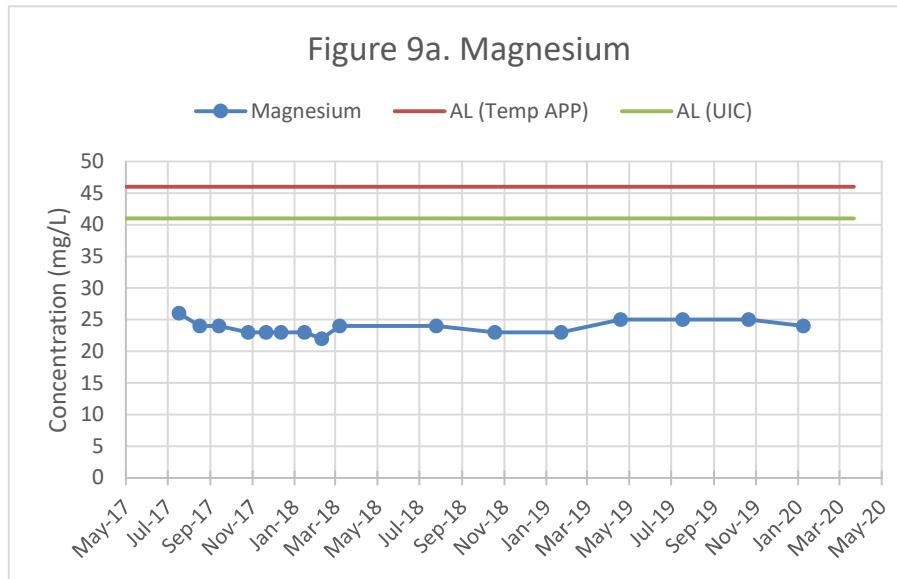
AQL = Aquifer Quality Limit

Temp APP = Temporary APP No P-106360

UIC = Underground Injection Control

UIC = UIC Permit No. R9UIC-AZ3-FY11-1

M56-LBF QUARTERLY CONCENTRATION GRAPHS



Notes:

AL = Alert level

APP = Aquifer Protection Permit

AQL = Aquifer Quality Limit

Temp APP = Temporary APP No P-106360

UIC = Underground Injection Control

UIC = UIC Permit No. R9UIC-AZ3-FY11-1

M57-O QUARTERLY CONCENTRATION GRAPHS

Figure 10a. Magnesium

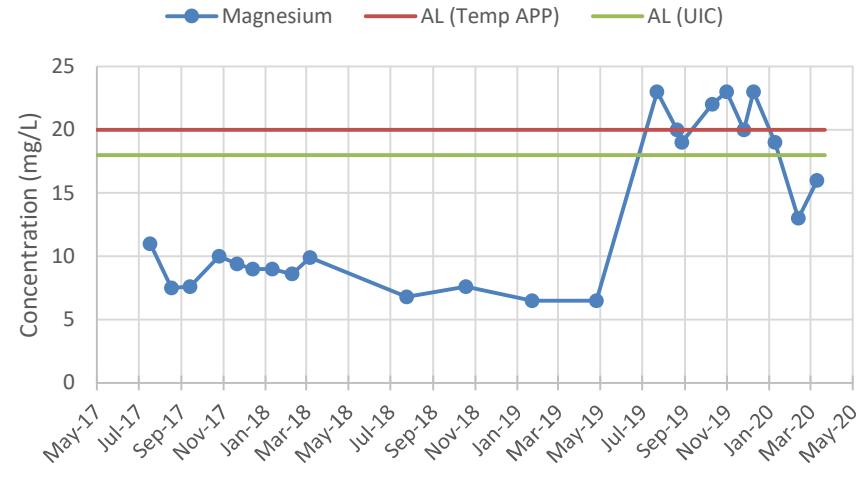


Figure 10b. Fluoride

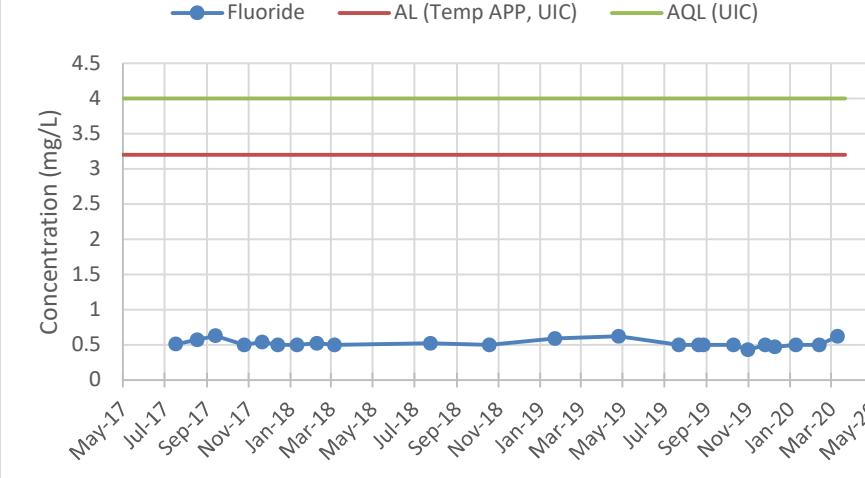


Figure 10c. pH (Field)

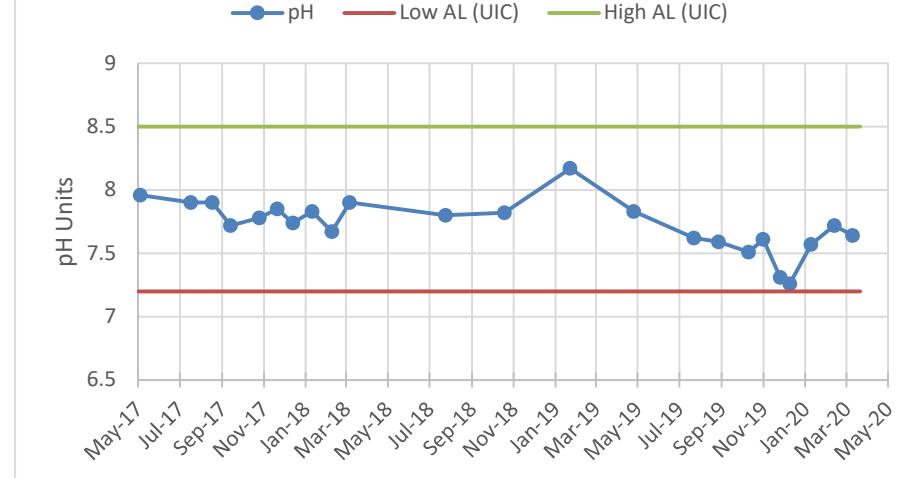


Figure 10d. Sulfate

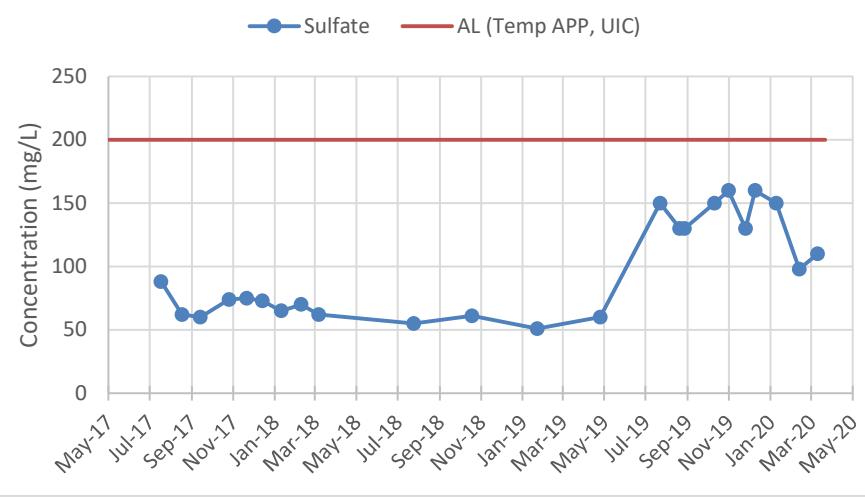


Figure 10e. Total Dissolved Solids

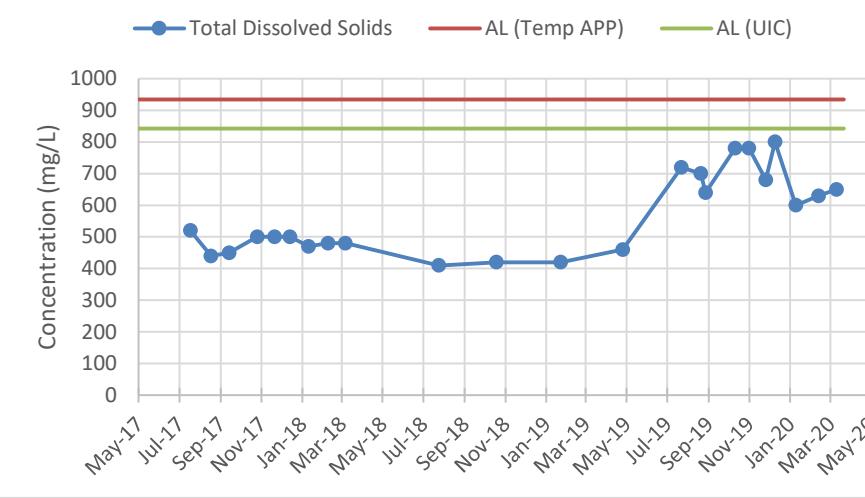
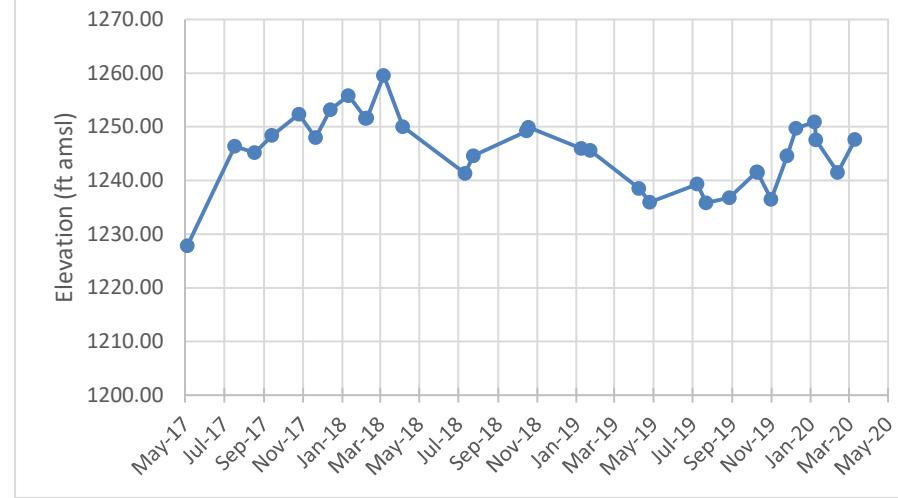


Figure 10f. Groundwater Elevation



Notes:

AL = Alert level

APP = Aquifer Protection Permit

AQL = Aquifer Quality Limit

Temp APP = Temporary APP No P-106360

UIC = Underground Injection Control

UIC = UIC Permit No. R9UIC-AZ3-FY11-1

M58-O QUARTERLY CONCENTRATION GRAPHS

Figure 11a. Magnesium

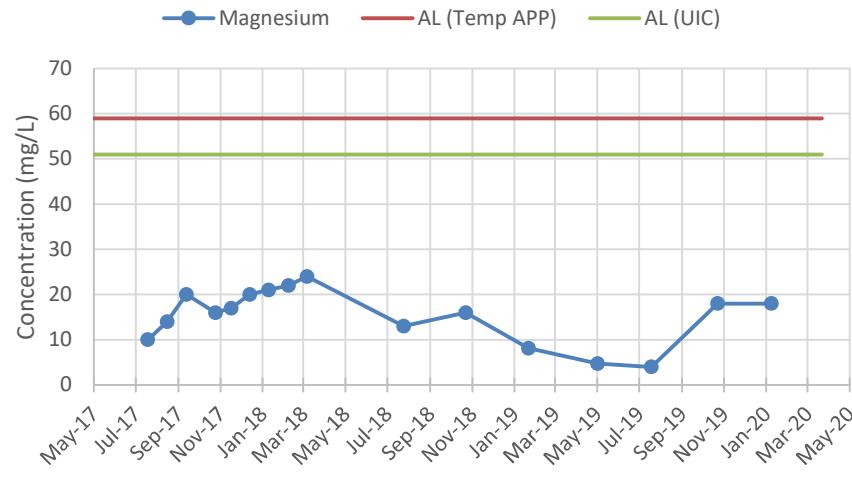


Figure 11b. Fluoride

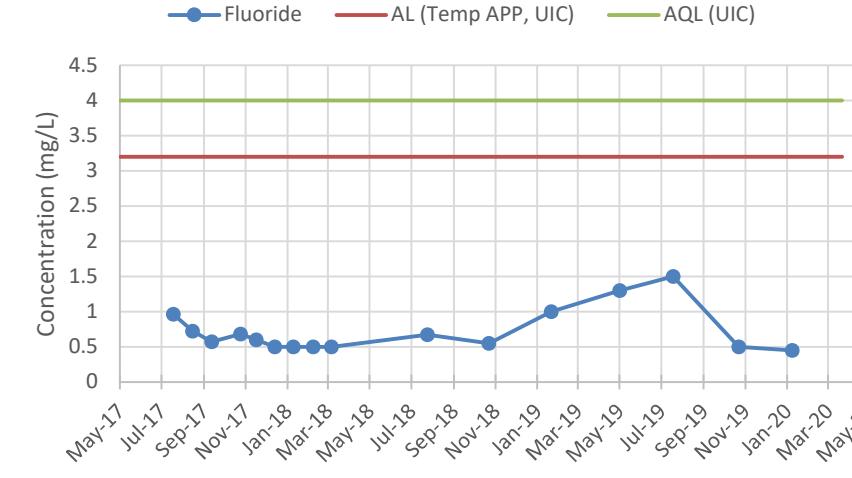


Figure 11c. pH (Field)

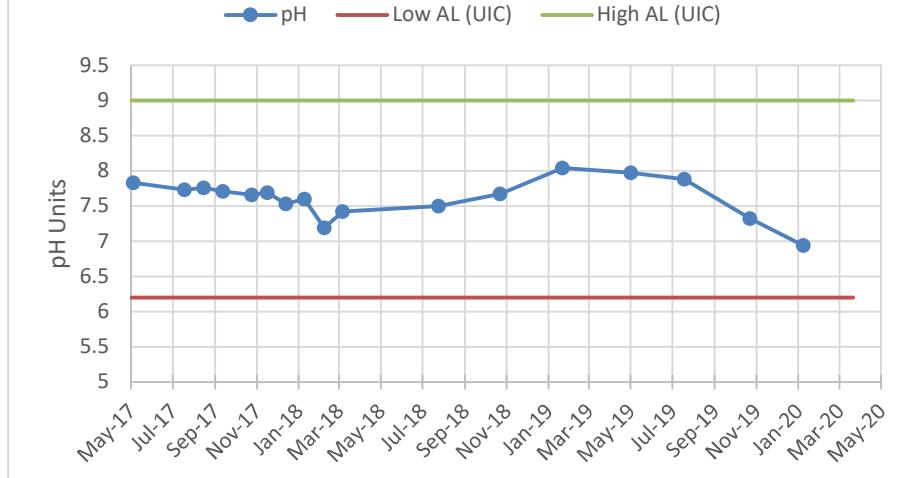


Figure 11d. Sulfate

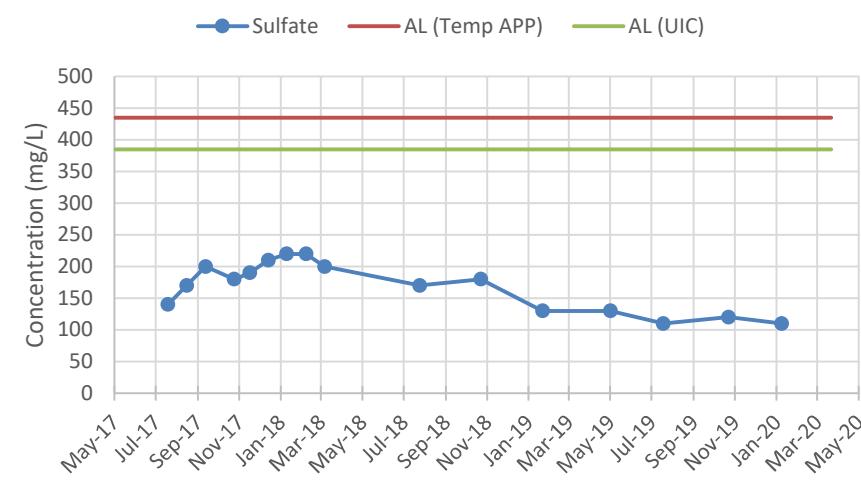


Figure 11e. Total Dissolved Solids

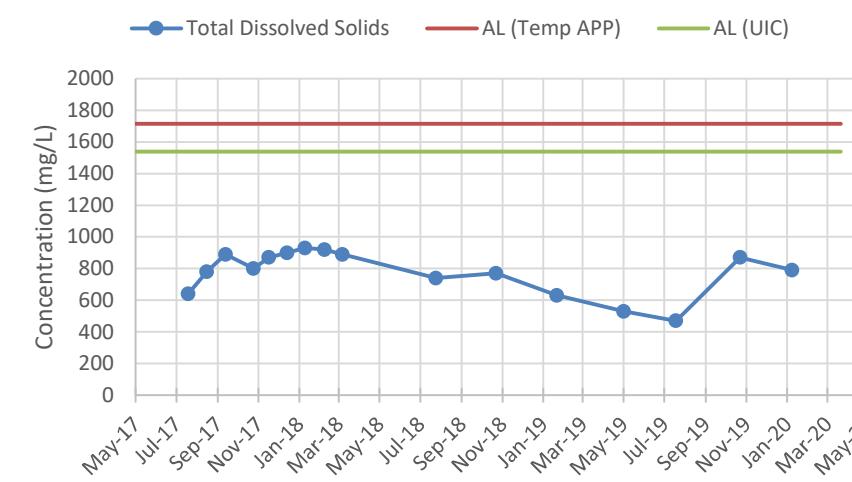
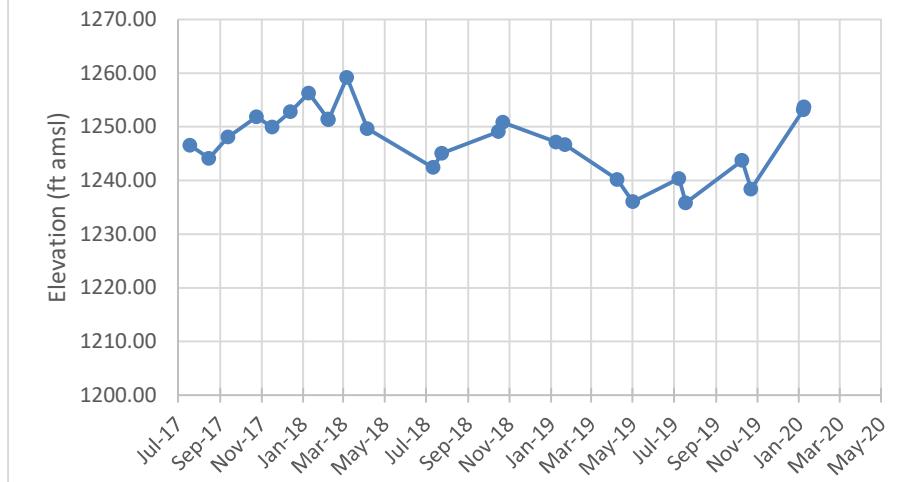


Figure 11f. Groundwater Elevation



Notes:

AL = Alert level

APP = Aquifer Protection Permit

AQL = Aquifer Quality Limit

Temp APP = Temporary APP No P-106360

UIC = Underground Injection Control

UIC = UIC Permit No. R9UIC-AZ3-FY11-1

M59-O QUARTERLY CONCENTRATION GRAPHS

Figure 12a. Magnesium

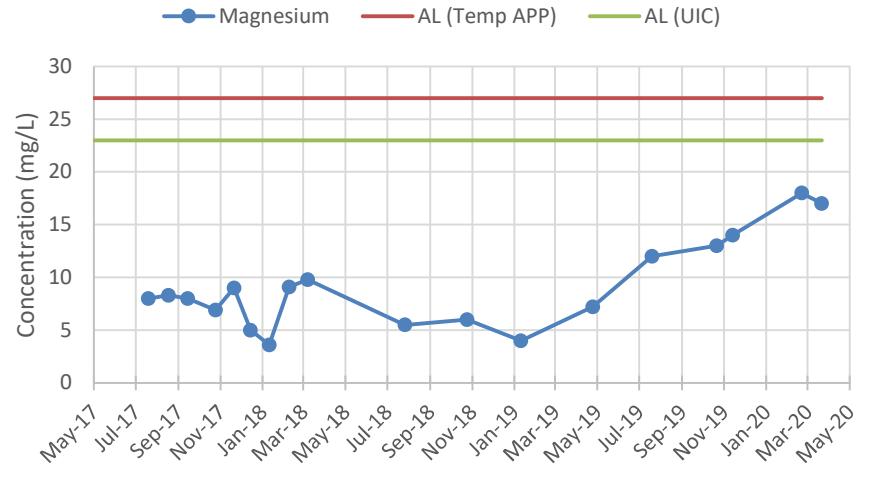


Figure 12b. Fluoride

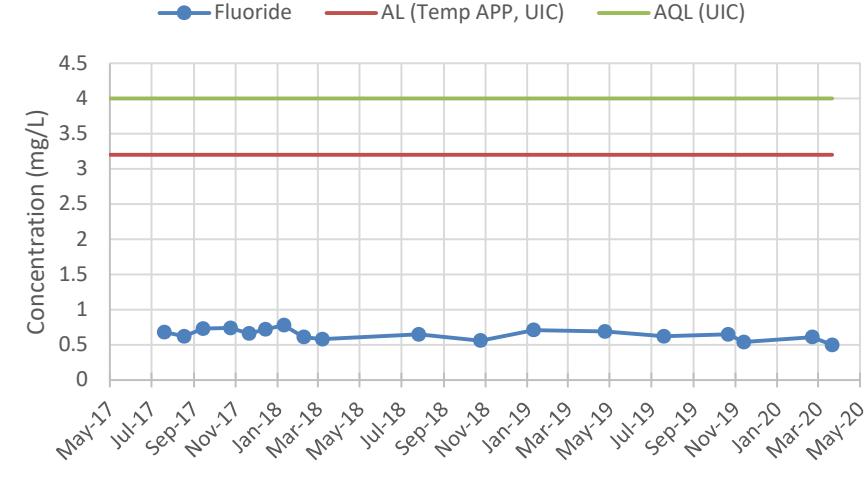


Figure 12c. pH (Field)

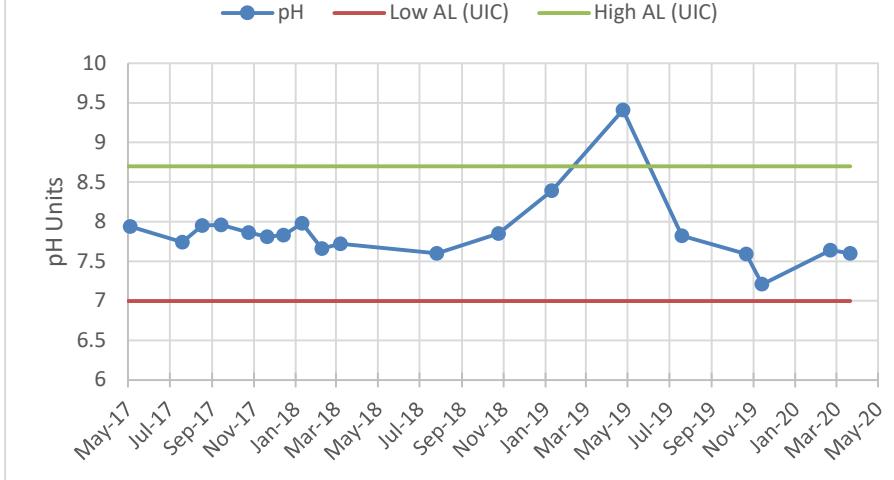


Figure 12d. Sulfate

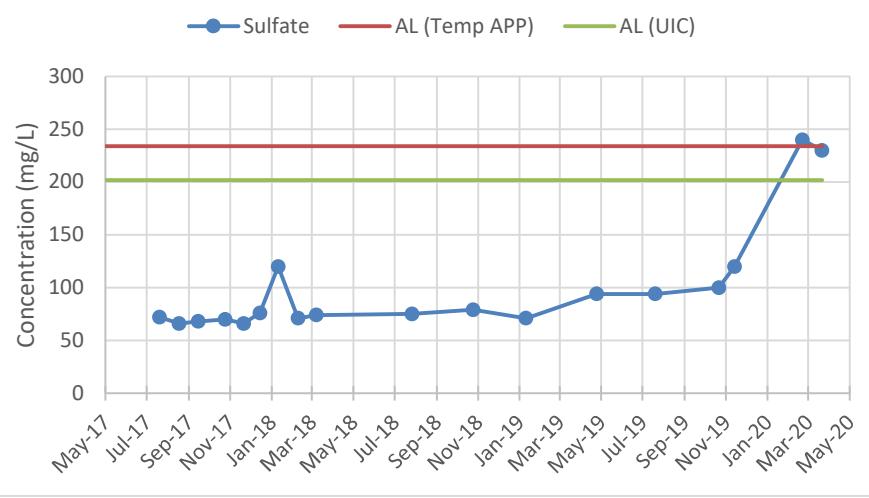


Figure 12e. Total Dissolved Solids

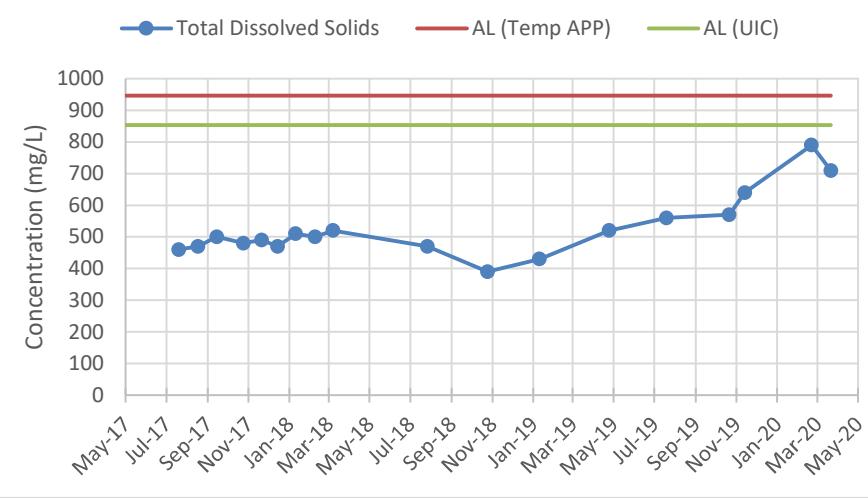
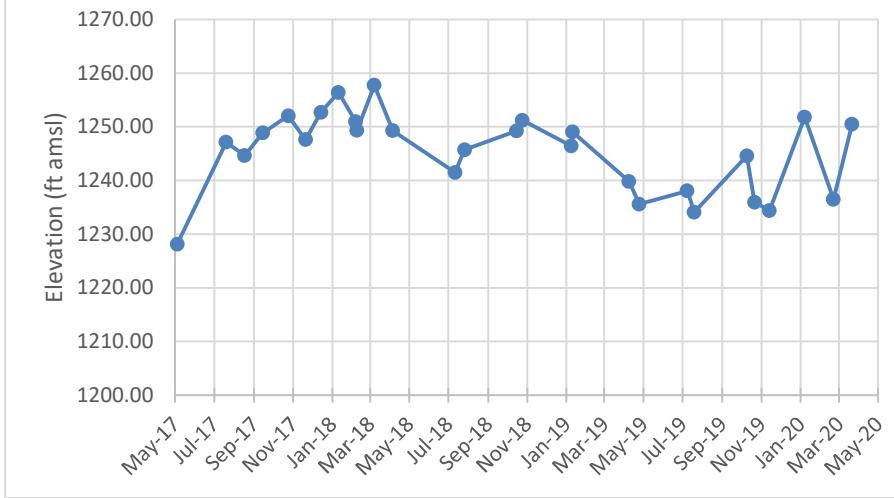


Figure 12f. Groundwater Elevation



Notes:

AL = Alert level

APP = Aquifer Protection Permit

AQL = Aquifer Quality Limit

Temp APP = Temporary APP No P-106360

UIC = Underground Injection Control

UIC = UIC Permit No. R9UIC-AZ3-FY11-1

M60-O QUARTERLY CONCENTRATION GRAPHS

Figure 13a. Magnesium

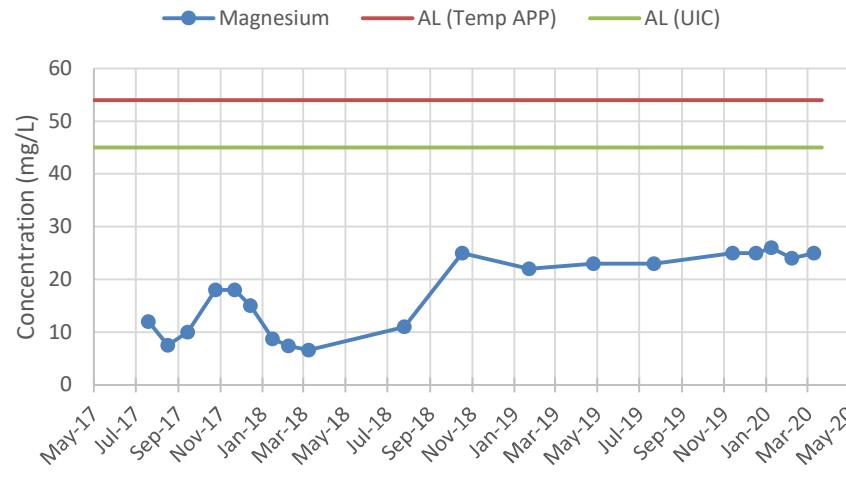


Figure 13b. Fluoride

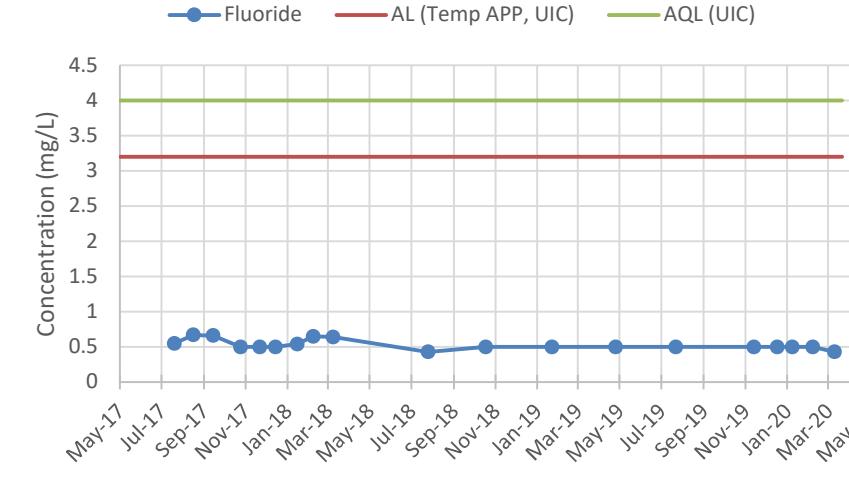


Figure 13c. pH (Field)

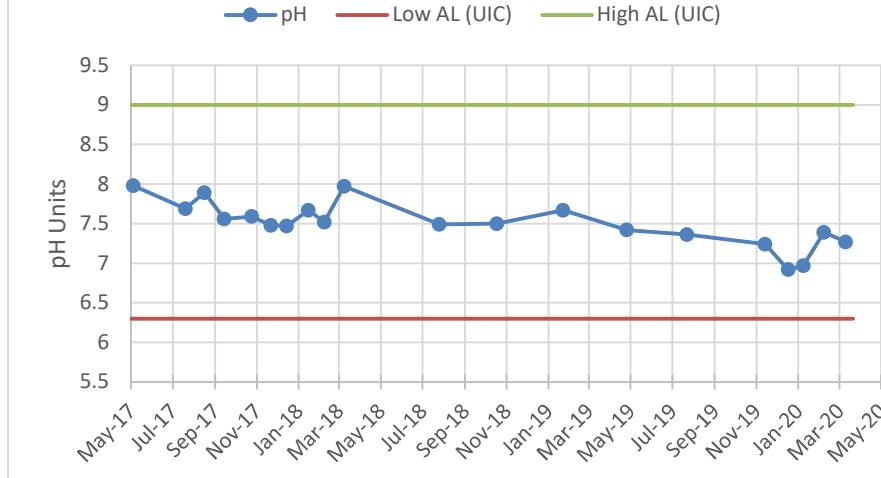


Figure 13d. Sulfate

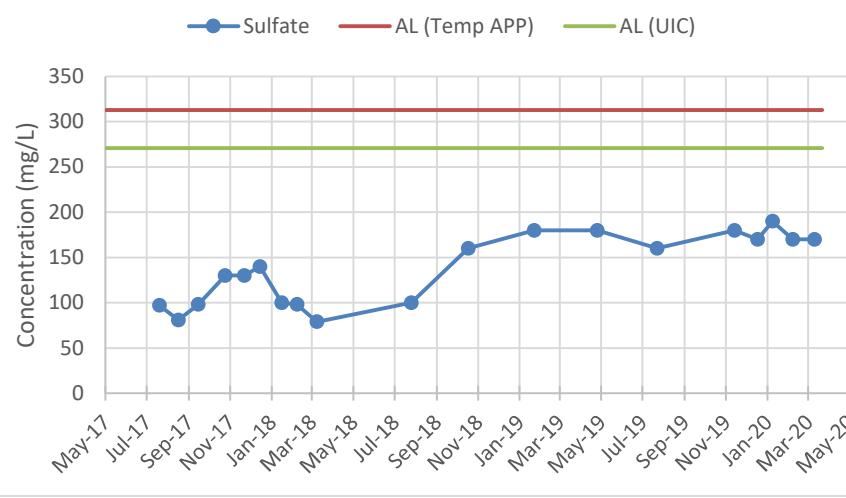


Figure 13e. Total Dissolved Solids

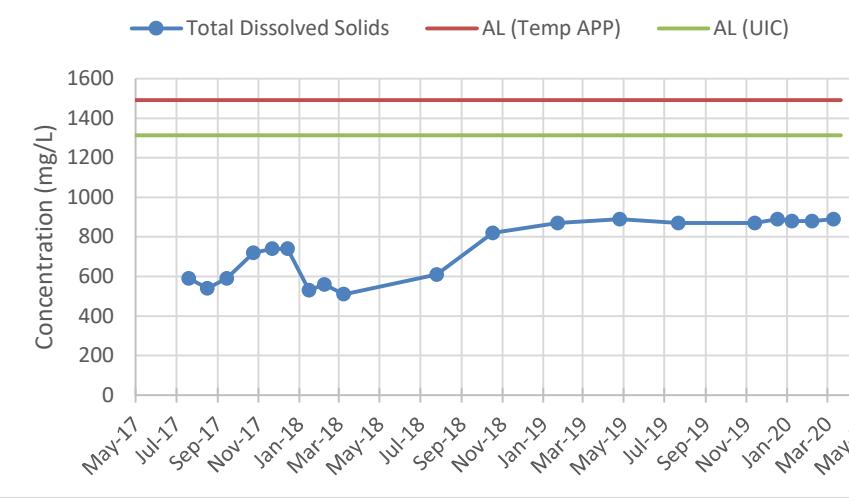
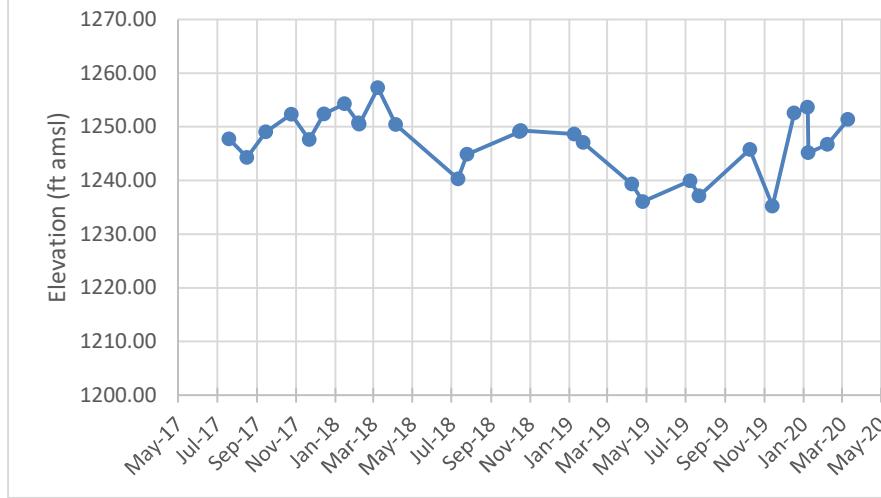


Figure 13f. Groundwater Elevation



Notes:

AL = Alert level

APP = Aquifer Protection Permit

AQL = Aquifer Quality Limit

Temp APP = Temporary APP No P-106360

UIC = Underground Injection Control

UIC = UIC Permit No. R9UIC-AZ3-FY11-1

M61-LBF QUARTERLY CONCENTRATION GRAPHS

Figure 14a. Magnesium

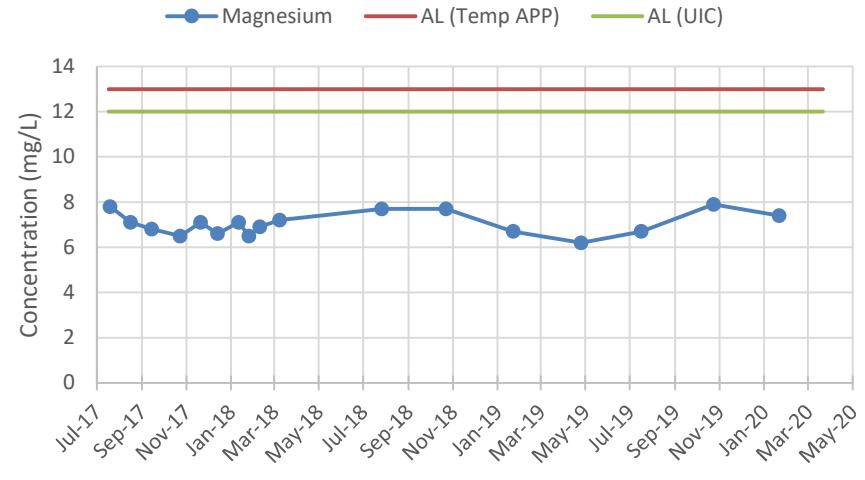


Figure 14b. Fluoride

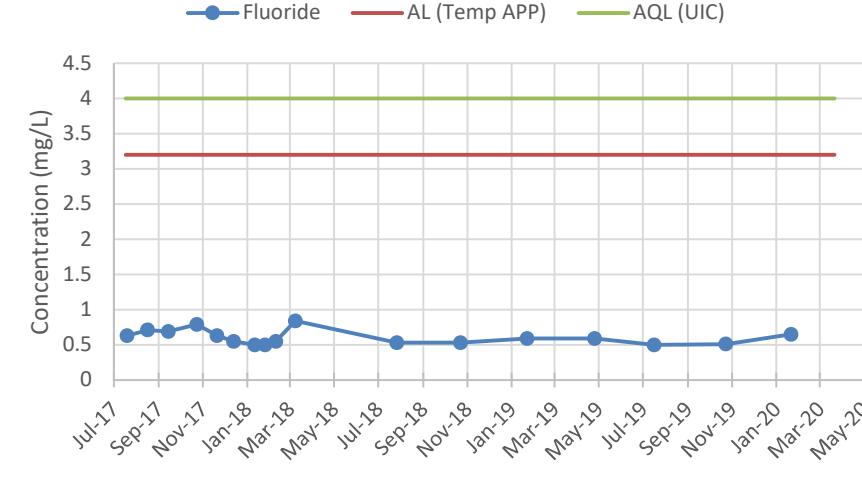


Figure 14c. pH (Field)

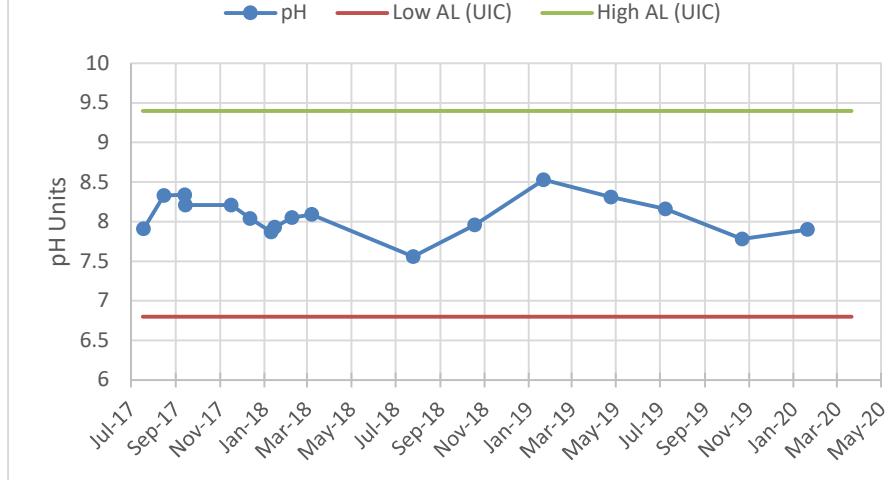


Figure 14d. Sulfate

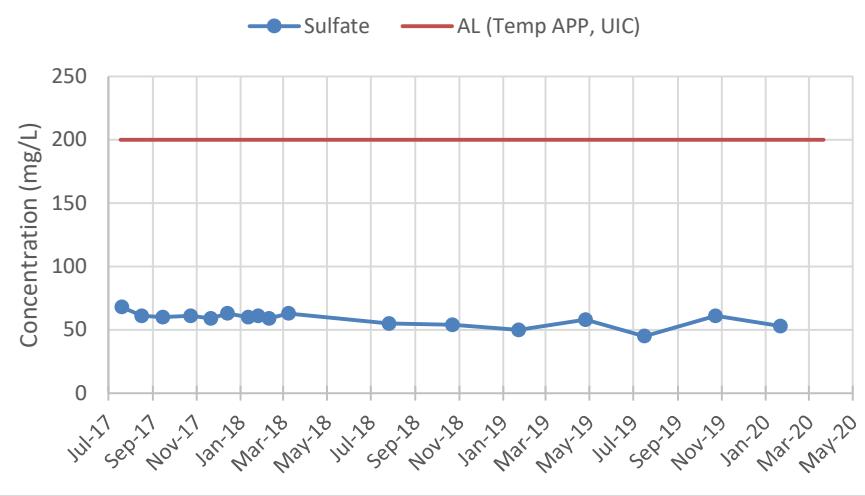


Figure 14e. Total Dissolved Solids

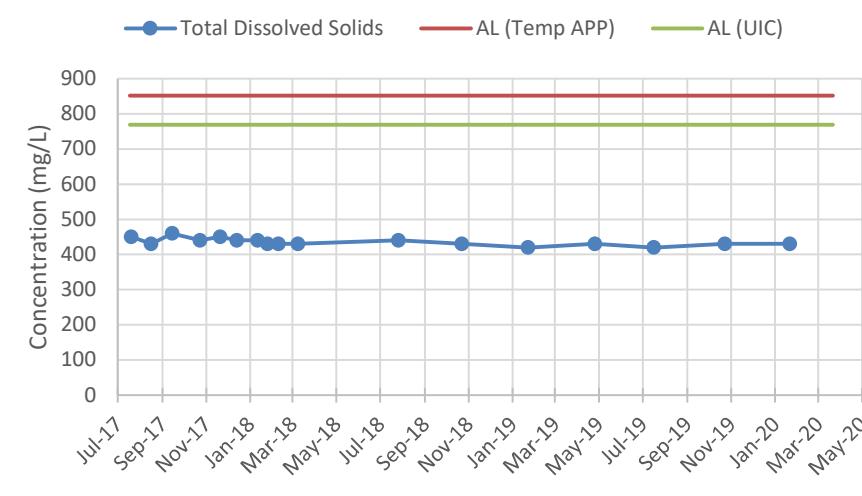
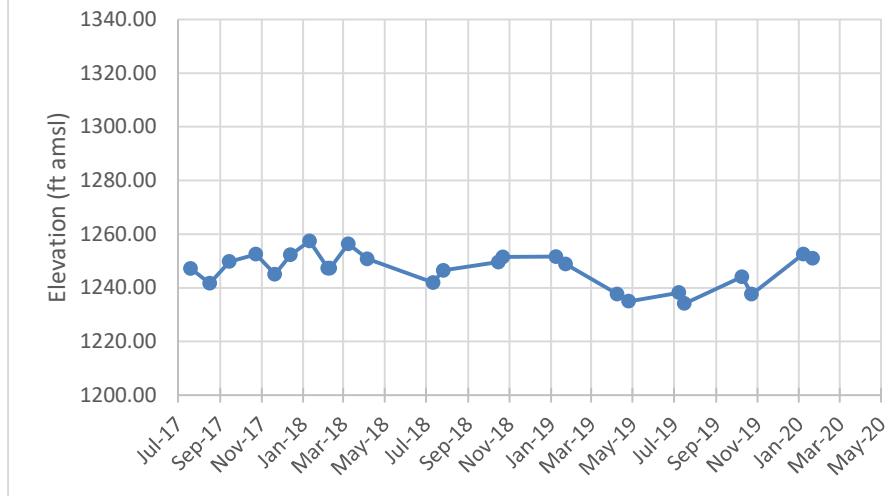


Figure 14f. Groundwater Elevation



Notes:

AL = Alert level

APP = Aquifer Protection Permit

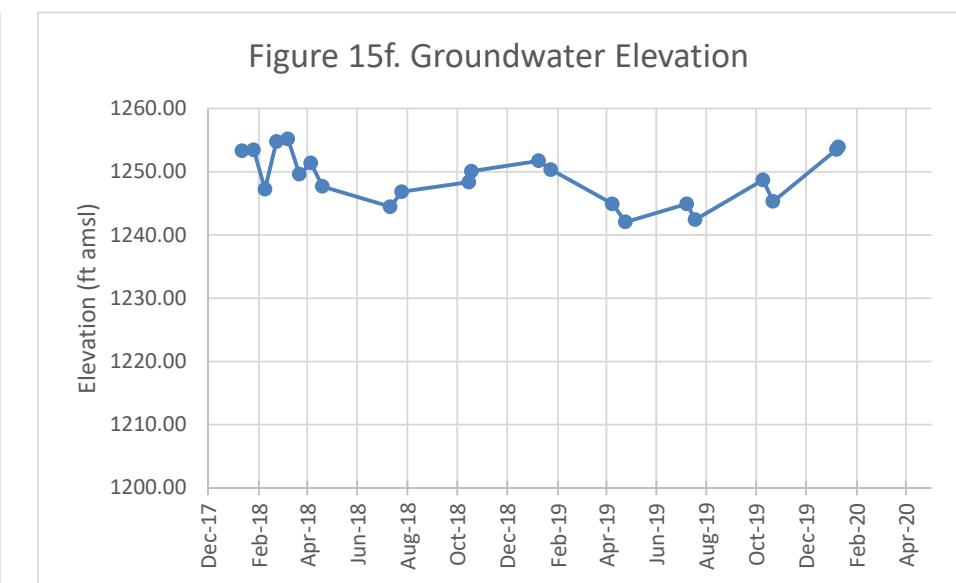
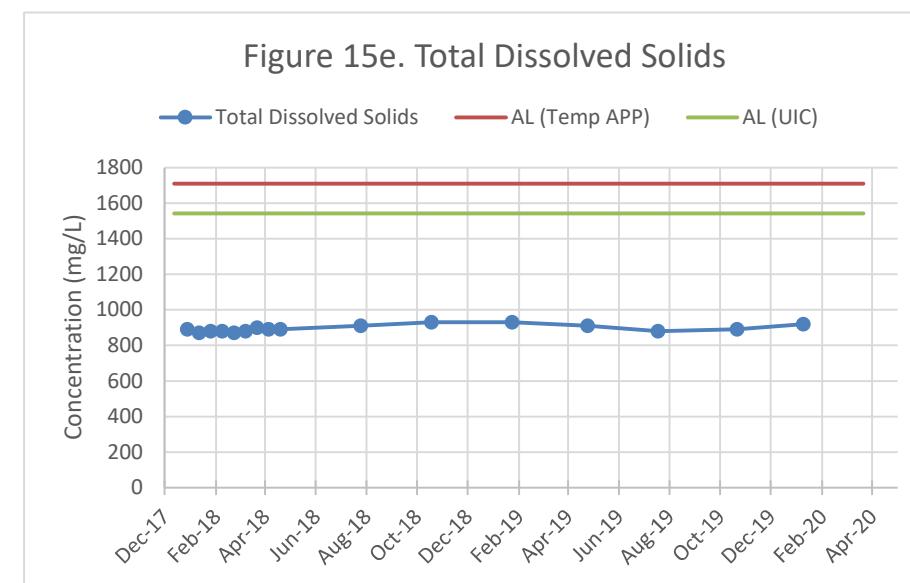
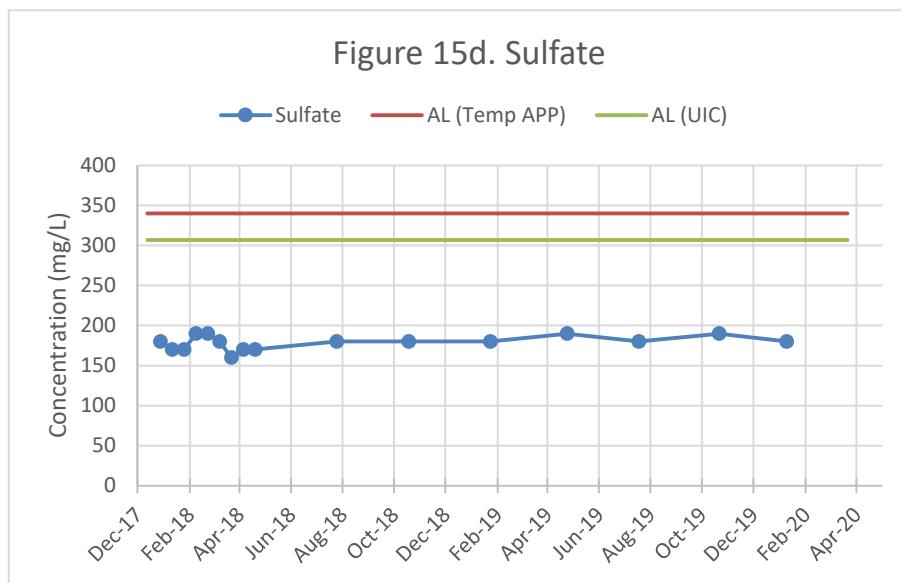
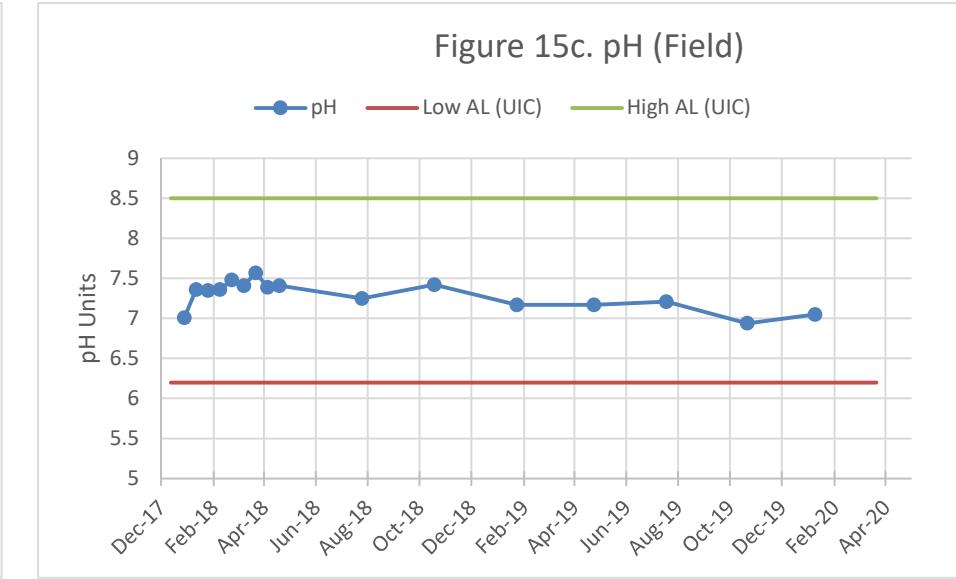
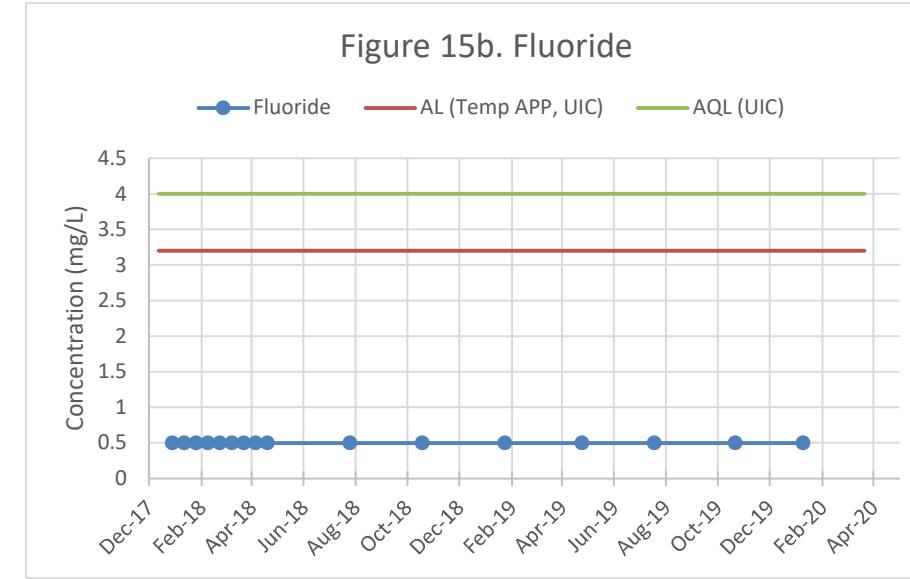
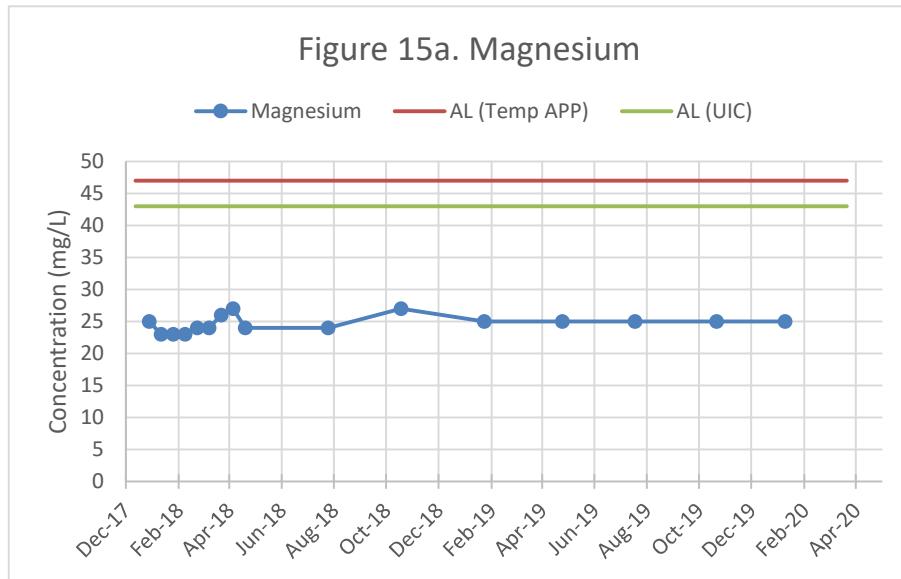
AQL = Aquifer Quality Limit

Temp APP = Temporary APP No P-106360

UIC = Underground Injection Control

UIC = UIC Permit No. R9UIC-AZ3-FY11-1

MW-01-LBF QUARTERLY CONCENTRATION GRAPHS



Notes:

AL = Alert level

APP = Aquifer Protection Permit

AQL = Aquifer Quality Limit

Temp APP = Temporary APP No P-106360

UIC = Underground Injection Control

UIC = UIC Permit No. R9UIC-AZ3-FY11-1

MW-01-O QUARTERLY CONCENTRATION GRAPHS

Figure 16a. Magnesium

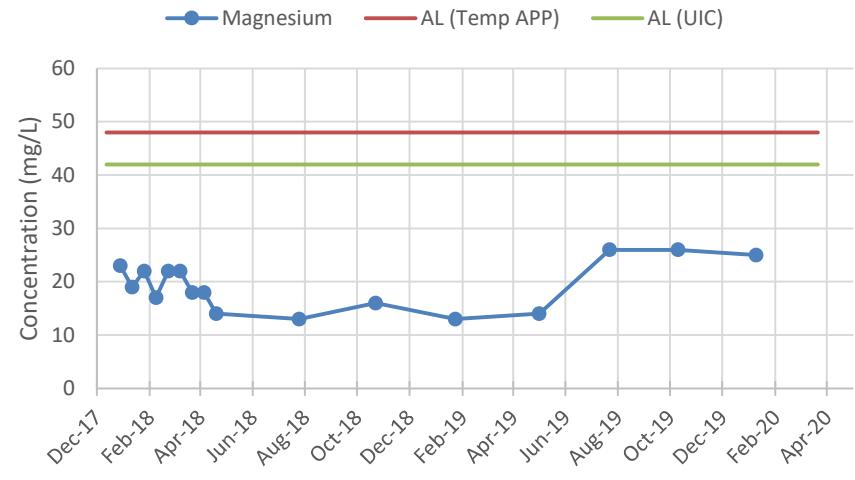


Figure 16b. Fluoride

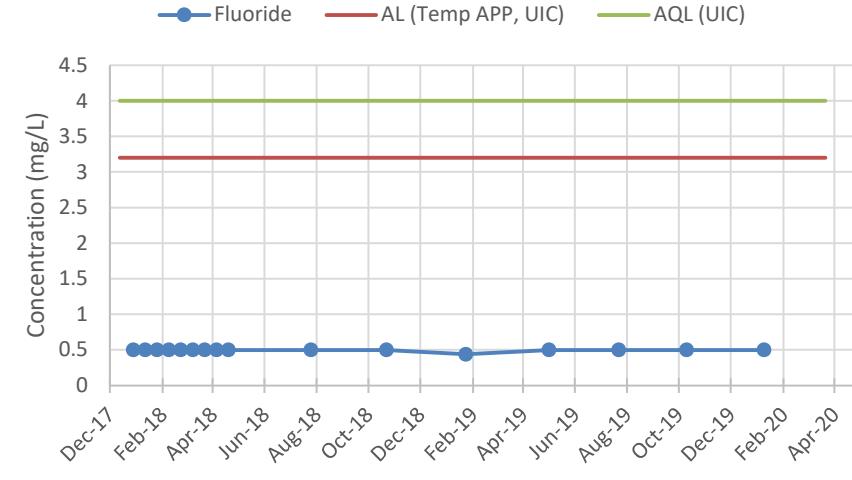


Figure 16c. pH (Field)

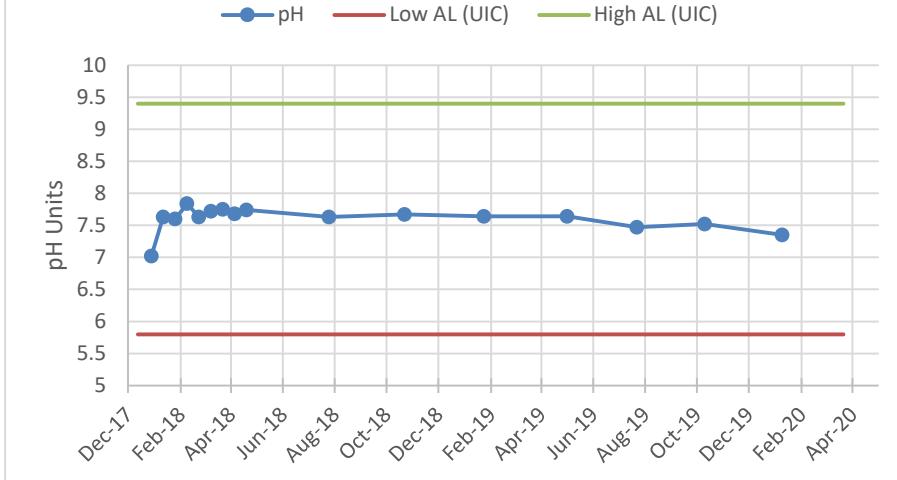


Figure 16d. Sulfate

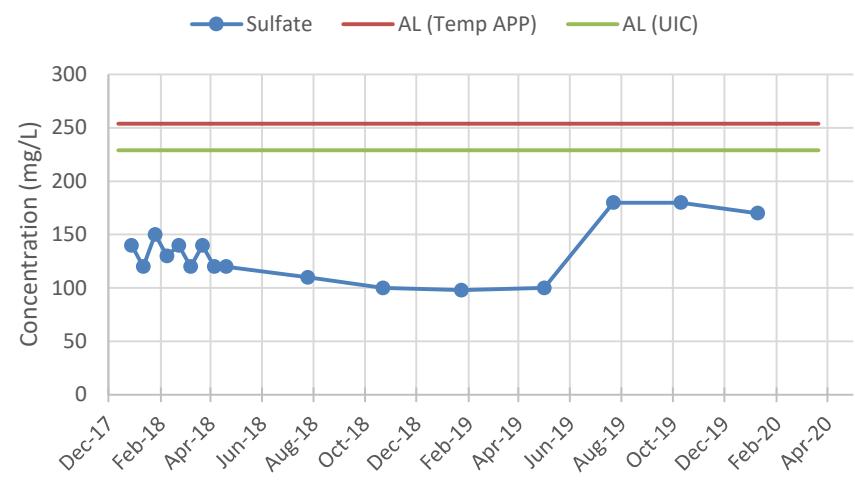


Figure 16e. Total Dissolved Solids

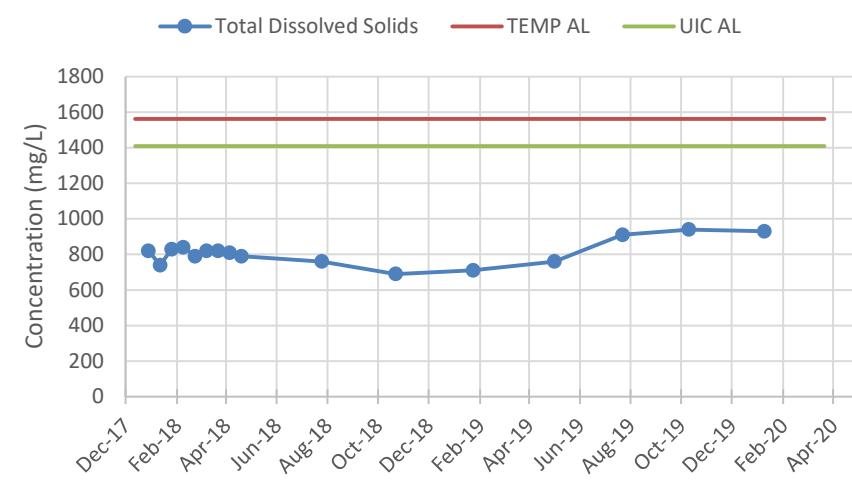
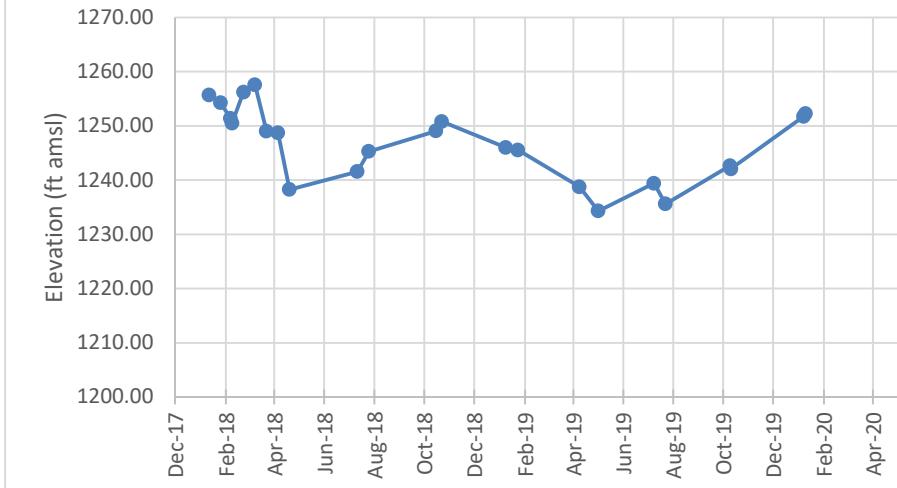


Figure 16f. Groundwater Elevation



Notes:

AL = Alert level

APP = Aquifer Protection Permit

AQL = Aquifer Quality Limit

Temp APP = Temporary APP No P-106360

UIC = Underground Injection Control

UIC = UIC Permit No. R9UIC-AZ3-FY11-1

ATTACHMENT 6B

Well Details and Water Level Elevations

**Q1 2020 TEMPORARY APP AND
UIC MONITORING WELL DETAILS**
FLORENCE COPPER INC.
FLORENCE, ARIZONA

Table 1. Well Details

Well ID	Well Type	ADWR #	Total Well Depth (ft bgs)	Latitude	Longitude	Screened Interval (ft bgs)	Aquifer Unit
M14-GL	POC	55-549172	838	33°03'4.0"N	111°26'15.77"W	778-838	LBFU
M15-GU	POC	55-547813	594	33°03'4.04"N	111°26'16.40"W	554-594	LBFU
M22-O	POC	55-555831	1,130	33°03'4.53"N	111°26'15.76"W	932-1,130	OXIDE
M23-UBF	POC	55-555824	250	33°03'4.51"N	111°26'16.50"W	210-250	UBFU
M54-LBF	POC	55-226792	629	33°03'7.07"N	111°26'9.29"W	310-629	LBFU
M54-O	POC	55-226798	1,199	33°03'6.91"N	111°26'9.22"W	668-1,199	OXIDE
M52-UBF	POC	55-226788	274	33°03'11.03"N	111°25'24.66"W	200-274	UBFU
M55-UBF	Monitor	55-226797	261	33°03'1.99"N	111°26'6.18"W	240-261	UBFU
M56-LBF	Monitor	55-226795	340	33°03'2.21"N	111°26'6.44"W	320-340	LBFU
M57-O	Monitor	55-226790	1,200	33°03'1.88"N	111°26'8.39"W	523-1,200	OXIDE
M58-O	Monitor	55-226794	1,200	33°03'5.20"N	111°26'4.94"W	594-1,200	OXIDE
M59-O	Monitor	55-226791	1,200	33°03'1.58"N	111°26'2.25"W	534-1,200	OXIDE
M60-O	Monitor	55-226796	1,201	33°02'58.70"N	111°26'5.78"W	444-1,201	OXIDE
M61-LBF	Monitor	55-226799	630	33°03'0.85"N	111°25'58.92"W	429-630	LBFU
MW-01-LBF	Operational	55-226789	440	33°03'02.9442"N	111°26'07.1046"W	330-440	LBFU
MW-01-O	Operational	55-226793	1,200	33°03'03.045"N	111°26'06.9786"W	500-1,200	OXIDE
New Wells Constructed or Replaced							
M57R-O	Monitor	55-229751	1,200	33°03'0.31"N	111°26'8.16"W	550-1,200	OXIDE

Notes:

ADWR = Arizona Department of Water Resources

ft bgs = feet below ground surface

LBFU = lower basin fill unit

POC = point of compliance

UBFU = upper basin fill unit

SUMMARY OF QUARTERLY WATER LEVELS

FLORENCE COPPER INC.

FLORENCE, ARIZONA

Table 2. Water Levels

Location ID	Date	Depth to Water (feet)	Description of Measuring Point	Elevation of Measuring Point (feet amsl)	Water Level Elevation (feet amsl)
M14-GL	01/07/2020	223.58	TOC	1477.12	1253.54
M14-GL	02/12/2020	NM	TOC	1477.12	NM
M15-GU	01/07/2020	222.85	TOC	1476.53	1253.68
M15-GU	01/16/2020	222.60	TOC	1476.53	1253.93
M22-O	01/07/2020	225.28	TOM	1478.58	1253.30
M22-O	01/15/2020	224.44	TOM	1478.58	1254.14
M23-UBF	01/07/2020	220.90	TOM	1477.61	1256.71
M23-UBF	01/16/2020	220.54	TOM	1477.61	1257.07
M52-UBF	01/07/2020	231.20	TOC	1485.04	1253.84
M52-UBF	01/20/2020	230.52	TOC	1485.04	1254.52
M54-LBF	01/07/2020	228.58	TOC	1481.92	1253.34
M54-LBF	01/16/2020	228.09	TOC	1481.92	1253.83
M54-O	01/07/2020	230.15	TOC	1482.47	1252.32
M54-O	01/09/2020	229.13	TOC	1482.47	1253.34
M55-UBF	01/07/2020	225.19	TOC	1479.14	1253.95
M55-UBF	01/08/2020	NM	TOC	1479.14	NM
M56-LBF	01/07/2020	225.06	TOC	1478.65	1253.59
M56-LBF	01/08/2020	224.75	TOC	1478.65	1253.90
M57-O	01/07/2020	227.80	TOC	1478.71	1250.91
M57-O	01/09/2020	231.16	TOC	1478.71	1247.55
M57-O	02/12/2020	237.24	TOC	1478.71	1241.47
M57-O	03/10/2020	231.10	TOC	1478.71	1247.61
M58-O	01/07/2020	228.93	TOC	1482.08	1253.15
M58-O	01/08/2020	228.40	TOC	1482.08	1253.68
M59-O	01/07/2020	228.36	TOC	1480.19	1251.83
M59-O	02/21/2020	243.72	TOC	1480.19	1236.47
M59-O	03/21/2020	229.70	TOC	1480.19	1250.49
M60-O	01/07/2020	223.73	TOC	1477.36	1253.63
M60-O	01/08/2020	232.20	TOC	1477.36	1245.16
M60-O	02/07/2020	230.64	TOC	1477.36	1246.72
M60-O	03/10/2020	226.00	TOC	1477.36	1251.36
M61-LBF	01/07/2020	228.18	TOC	1480.78	1252.60
M61-LBF	01/21/2020	229.75	TOC	1480.78	1251.03
MW-01-LBF	01/07/2020	225.40	TOC	1478.92	1253.52
MW-01-LBF	01/09/2020	225.00	TOC	1478.92	1253.92
MW-01-O	01/07/2020	227.32	TOC	1479.07	1251.75
MW-01-O	01/09/2020	226.78	TOC	1479.07	1252.29
Mine Shaft	01/07/2020	225.75	TOC	1480.40	1254.65
Status of Local Production Wells					
BIA-9R	01/07/2020		Not pumping		
BIA-10	01/07/2020		Not pumping		
PW2-1	01/07/2020		Not pumping		
WW-4	01/07/2020		Not pumping		

Notes:

amsl = above mean sea level

NM = Not measured; unable to get sounder downhole

TOC = top of casing

TOM = top of monument

ATTACHMENT 6C

Groundwater Monitoring Summary

TECHNICAL MEMORANDUM

20 April 2020
File No. 133887-004

TO: Florence Copper Inc.
Brent Berg
General Manager

FROM: Haley & Aldrich, Inc.
Sarah Cooper, P.E.
Technical Specialist
Mark Nicholls, R.G.
Senior Hydrogeologist

SUBJECT: Florence Copper Project
Quarterly Compliance Monitoring Report
Temporary Aquifer Protection Permit (APP) and Underground Injection Control (UIC)
Permits, First Quarter 2020



Haley & Aldrich, Inc. has prepared this memorandum to present the results of the quarterly compliance groundwater monitoring conducted during the first quarter (Q1) 2020 at the Florence Copper Project. The Florence Copper Project is subject to three related permits issued by the Arizona Department of Environmental Quality (ADEQ) and the U.S. Environmental Protection Agency (USEPA).

APP Covering the 1997-98 BHP Pilot Facilities and Future Operations (Sitewide APP):

- ADEQ APP No. P-101704 (LTF 65804) dated 13 October 2017.

Permits Covering the Current Production Test Facility:

- ADEQ Temporary APP No. P-106360 (LTF 80030) dated 13 February 2020 (Temporary APP), and
- USEPA UIC Permit No. R9UIC-AZ3-FY11-1 dated 20 December 2016.

This report presents the results of the Q1 2020 groundwater monitoring activities required by the Temporary APP and UIC permits.

SAMPLING ACTIVITIES

During Q1 2020, monitoring was conducted at 16 point-of-compliance, monitoring, and supplemental wells. Water levels were collected on 7 January 2020, and quarterly groundwater sampling was conducted between 8 January and 21 March 2020. For some wells, multiple samples were collected due to potential or confirmed alert level (AL) exceedances. Additional details are provided below. Groundwater sampling and analysis was conducted in accordance with the requirements of Sections 2.5.3 and 2.5.8 of the Temporary APP and Part II.F of the UIC Permit.

The majority of the monitoring wells are equipped with low-flow bladder pumps. Low-flow sampling was conducted in accordance with Section 2.5.3 of the Temporary APP. Wells M14-GL, M22-O, M57-O, and M59-O were equipped with stainless steel electric pumps and were sampled by purging a minimum of three borehole volumes. No modified sampling procedures were used, and no reduced pumping volumes were observed.

Each sample was labeled, placed in a cooler with ice, maintained at 4 degrees Celsius ($^{\circ}\text{C}$) $\pm 2^{\circ}\text{C}$, and transported under chain of custody to Turner Laboratories, Inc. (Turner) or Pace Analytical (Pace) for analysis. All samples were analyzed for the quarterly (Level 1) monitoring parameters listed in Table 4.1-6 of the Temporary APP and Table 1 of the UIC Permit.

Additional monitoring was required during Q1 2020 for wells M57-O and M60-O due to AL exceedances confirmed in Q4 2019¹. Wells M57-O and M60-O were monitored on a monthly basis during Q1 2020. Samples collected from M57-O and M60-O in January were analyzed for the quarterly (Level 1) monitoring parameters, as well as the semi-annual (Level 2) monitoring parameters in Table 4.1-7 of the Temporary APP and Table 2 of the UIC Permit. Samples collected in February and March were analyzed for the quarterly (Level 1) monitoring parameters, and those Level 2 parameters with potential and confirmed AL exceedances. Sample containers collected for radiological parameter analysis were labelled and transported under chain of custody directly to Radiation Safety Engineers who performed the analyses as a subcontractor to the primary laboratory.

Results

The results of the Q1 2020 monitoring event are presented in Tables 1 through 4 as follows:

- Table 1 – Field Parameters²;
- Table 2 – Quarterly (Level 1) Analytical Parameters;
- Table 3 – M57-O Monthly Monitoring Summary; and
- Table 4 – M60-O Monthly Monitoring Summary.

¹ Well M57-O had a confirmed exceedance of the Temporary APP and UIC magnesium ALs based on the sample collected on 31 October 2019. Well M60-O had a confirmed exceedance of the Temporary APP gross alpha AL based on the sample collected on 17 December 2019. Confirmed exceedances of Temporary APP ALs necessitate monthly monitoring.

² Note that turbidity was monitored as a field parameter in addition to field pH, temperature, and specific conductance, but is not required by the Temporary APP or UIC permit and is therefore not reported.

The Q1 2020 results were compared to the ALs and aquifer quality limits (AQL) listed in the applicable tables in Section 4.0 of the Temporary APP, Appendix K of the UIC Permit, and Table 4B of the document submitted to the USEPA dated 12 December 2018 and entitled “Procedures for Determining Alert Levels and Aquifer Quality Limits for Groundwater Compliance Monitoring.”

No AQL exceedances occurred during Q1 2020. The following AL exceedances occurred in Q1 2020, and are described in more detail below:

- Magnesium in well M57-O during the January 2020 sampling event exceeded the Temporary APP and UIC ALs;
- Sulfate in well M59-O exceeded the UIC AL; and
- Gross alpha in well M60-O exceeded the Temporary APP AL for each of the three monthly Q1 sampling events.

A quality assurance/quality control summary of the Q1 2020 data is provided in Appendix A.

CONTINGENCY SAMPLING PLANS

As described above, monthly monitoring was conducted during Q1 2020, as required by Section 2.6.2.4.1 of the Temporary APP, at wells M57-O and M60-O. Contingency sampling plan procedures generally consistent with Section 2.6.2.4 of the Temporary APP and Part II.H.2 of the UIC Permit were also implemented during Q1 2020 when initial sample results indicated a potential AL exceedance in well M59-O and a new potential AL and AQL exceedance in well M60-O.

Well M57-O

In Q4 2019, an exceedance of the Temporary APP and UIC magnesium AL was confirmed at M57-O. Monthly monitoring of M57-O began in November 2019 in accordance with Section 2.6.2.4.1 of the Temporary APP and continued through Q1 2020.

With the exception of magnesium, all parameters at M57-O were below their respective ALs throughout the Q1 sampling events. The magnesium concentration in M57-O from the primary January 2020 sample was reported at 19 milligrams per liter (mg/L), below the Temporary APP AL of 20 mg/L, but above the UIC AL of 18 mg/L. The magnesium concentration from a split sample collected from M57-O during the January sampling event was 21 mg/L, and therefore exceeded both the UIC and Temporary APP ALs. The magnesium concentrations in the February and March 2020 samples (13 mg/L and 16 mg/L, respectively) were below both ALs. In accordance with Section 2.6.2.4.1 of the Temporary APP, monthly monitoring of M57-O will continue until three sequential sampling events demonstrate that magnesium concentrations, and concentrations of all other parameters, are below their applicable ALs, at which point monitoring may return to the standard quarterly schedule.

Well M59-O

On 11 March 2020, Florence Copper was notified of a potential exceedance of the Temporary APP and UIC sulfate ALs at well M59-O, based on the sample collected on 21 February 2020. All other parameters were below their respective ALs. The sulfate concentration in well M59-O was reported at 240 mg/L. The Temporary APP and UIC ALs for sulfate in M59-O are 234 mg/L and 202 mg/L, respectively. Florence Copper Inc. (Florence Copper) requested laboratory confirmation of the initial sample result on 11 March 2020 and notified ADEQ of the potential AL exceedance via email on 16 March 2020. Turner confirmed that the sulfate concentration in the 21 February 2020 sample was above the ALs on 19 March 2020.

A verification sample was collected from M59-O on 21 March 2020, and Florence Copper was notified of the verification sample results on 13 April 2020. The sulfate concentration in the M59-O verification sample was reported at 230 mg/L, below the Temporary APP AL, but above the UIC AL. Therefore, the potential exceedance of the Temporary APP AL was dismissed, while the exceedance of the UIC AL was confirmed. Florence Copper notified the USEPA of the confirmed sulfate AL exceedance on 13 April 2020 and a report evaluating the exceedance is forthcoming. Florence Copper notified ADEQ of the verification results and dismissal of the potential AL exceedance on 13 April 2020 and no further action is required under the Temporary APP.

Well M60-O

In Q4 2019, an exceedance of the Temporary APP gross alpha AL was confirmed at well M60-O. Monthly monitoring of M60-O began in January 2020 in accordance with Section 2.6.2.4.1 of the Temporary APP and continued through Q1 2020. As required by Section 2.6.2.4.1 of the Temporary APP, Florence Copper submitted a 30-day report regarding the confirmed exceedance to ADEQ via email on 30 January 2020.

On 3 February 2020 Florence Copper was notified that, based on the 8 January 2020 sampling event, gross alpha remained above the Temporary APP AL of 15 picocuries per liter (pCi/L). Additionally, the following potential exceedance was identified at well M60-O:

- The adjusted gross alpha result of 17.8 ± 3 pCi/L exceeded the UIC AL and AQL of 17.4 pCi/L.

All other results were below their applicable ALs and AQLs. Verification sampling was conducted in conjunction with the February monthly monitoring event on 7 February 2020. Florence Copper was notified of the verification sample results on 2 March 2020. Gross alpha remained above the Temporary APP AL in the 7 February sample, while adjusted gross alpha was reported at 12.6 ± 2.6 pCi/L, below the UIC AL and AQL of 17.4 pCi/L. Therefore, the potential adjusted gross alpha exceedance was dismissed. Florence Copper notified the USEPA of the adjusted gross alpha verification sampling results on 2 March 2020, and no further action related to adjusted gross alpha was required.

The results of the 10 March 2020 sampling event report that gross alpha remained above the Temporary APP AL. Under the Temporary APP, monthly sampling of well M60-O will continue until three sequential sampling events demonstrate that gross alpha concentrations are below the applicable AL.

Enclosures:

- Table 1 – Q1 2020 Field Parameters
- Table 2 – Q1 2020 Quarterly (Level 1) Analytical Parameters
- Table 3 – Q1 2020 M57-O Monthly Monitoring Summary
- Table 4 – Q1 2020 M60-O Monthly Monitoring Summary
- Appendix A – Data Quality Assurance/Quality Control Summary Memorandum

\haleyaldrich.com\share\phx_common\Projects\Florence Copper\133887 Quarterly Monitoring\Deliverables\1Q 2020 Reports\1Q 2020 Temp APP Report\Attachments\APP 10 UIC 6 Quarterly Compliance Monitoring Report\2020-0420_TempAPP UIC POC 1Q2020 Report_D2.docx

TABLES

TABLE 1
Q1 2020 FIELD PARAMETERS
FLORENCE COPPER INC.
FLORENCE, ARIZONA

Location	Sample Date	Temperature, Field Deg C	Temperature, Field Deg F	pH, Field pH units	pH Low UIC Alert Level pH units	pH High UIC Alert Level pH units	Specific Conductance, Field umhos/cm
M14-GL	02/12/2020	26.7	80.1	8.24	NE	NE	750
M15-GU	01/16/2020	21.4	70.5	7.41	NE	NE	1,540
M22-O	01/16/2020	27.8	82.0	8.15	NE	NE	876
M23-UBF	01/16/2020	21.9	71.4	7.18	NE	NE	2,107
M52-UBF	01/20/2020	22.4	72.3	7.18	6.9	7.9	1,539
M54-LBF	01/16/2020	22.2	72.0	7.22	6.5	8.2	1,612
M54-O	01/09/2020	21.1	70.0	7.67	6.8	9.4	902
M55-UBF	01/08/2020	22.4	72.3	6.90	6.6	7.8	1,753
M56-LBF	01/08/2020	22.2	72.0	6.95	6.5	8.3	1,508
M57-O	01/09/2020	24.9	76.8	7.57	7.2	8.5	1,288
M57-O	02/12/2020	26.0	78.8	7.72	7.2	8.5	941
M57-O	03/10/2020	25.0	77.0	7.64	7.2	8.5	1,185
M58-O	01/08/2020	22.8	73.0	6.94	6.2	9.0	1,486
M59-O	02/21/2020	25.4	77.7	7.64	7.0	8.7	1,359
M59-O	03/21/2020	25.5	77.9	7.60	7.0	8.7	1,190
M60-O	01/08/2020	21.5	70.7	6.97	6.3	9.0	1,449
M60-O	02/07/2020	22.1	71.8	7.39	6.3	9.0	1,409
M60-O	03/10/2020	22.2	72.0	7.27	6.3	9.0	1,581
M61-LBF	01/21/2020	21.4	70.5	7.90	6.8	9.4	811
MW-01-LBF	01/09/2020	21.7	71.1	7.05	6.2	8.5	1,629
MW-01-O	01/09/2020	21.6	70.9	7.35	5.8	9.4	1,589

Notes:

Deg C = degrees Celsius

Deg F = degrees Fahrenheit

NE = not established

μ mhos/cm = micromhos per centimeter

UIC = Underground Injection Control

TABLE 2**Q1 2020 QUARTERLY (LEVEL I) ANALYTICAL PARAMETERS**

FLORENCE COPPER INC.

FLORENCE, ARIZONA

Location ID	Sample Date	Sample Type	Magnesium, Dissolved			Sulfate			Fluoride					Total Dissolved Solids (TDS)		
			Concentration	TEMP APP Alert Level	UIC Alert Level	Concentration	TEMP APP Alert Level	UIC Alert Level	Concentration	TEMP APP Alert Level	TEMP APP AQL	UIC Alert Level	UIC AQL	Concentration	TEMP APP Alert Level	UIC Alert Level
M14-GL	2/12/2020	Primary	2 J	23	23	71	144	144	0.65	3.2	4.0	3.2	4.0	470	874	874
M15-GU	1/16/2020	Primary	26	44	44	89	126	126	0.51	3.2	4.0	3.2	4.0	840	1359	1359
M22-O	1/16/2020	Primary	6.4	8.6	8.6	54	86	86	0.69	3.2	4.0	3.2	4.0	440	1094	1094
M23-UBF	1/16/2020	Primary	31	69	69	240	411	411	0.83	3.2	4.0	3.2	4.0	1100	2392	2392
M23-UBF	1/16/2020	Split	30.9	69	69	247	411	411	0.825	3.2	4.0	3.2	4.0	1100	2392	2392
M52-UBF	1/20/2020	Primary	25	45	41	170	351	316	0.77	3.2	4.0	3.2	4.0	900	1666	1502
M54-LBF	1/16/2020	Primary	25	46	42	170	329	297	0.80	3.2	4.0	3.2	4.0	950	1731	1561
M54-O	1/9/2020	Primary	6.0	11	10	58	200	200	0.56	3.2	4.0	3.2	4.0	460	855	771
M55-UBF	1/8/2020	Primary	24	50	45	180	484	425	0.54	3.2	-	3.2	4.0	910	1900	1711
M56-LBF	1/8/2020	Primary	24	46	41	160	312	281	< 0.40	3.2	-	3.2	4.0	880	1646	1485
M57-O	1/9/2020	Primary	19	20	18	150	200	200	< 0.40	3.2	-	3.2	4.0	600	934	842
M57-O	1/9/2020	Split	21	20	18	128	200	200	0.439	3.2	-	3.2	4.0	670	934	842
M57-O ⁽²⁾	2/12/2020	Primary	13	20	18	98	200	200	0.50	3.2	-	3.2	4.0	630	934	842
M57-O ⁽²⁾	3/10/2020	Primary	16	20	18	110	200	200	0.62	3.2	-	3.2	4.0	650	934	842
M58-O	1/8/2020	Primary	18	59	51	110	435	385	0.45 J	3.2	-	3.2	4.0	790	1716	1539
M59-O	2/21/2020	Primary	18	27	23	240	234	202	0.61	3.2	-	3.2	4.0	790	947	854
M59-O	3/21/2020	Primary	17	27	23	230	234	202	< 0.40	3.2	-	3.2	4.0	710	947	854
M60-O	1/8/2020	Primary	26	54	45	190	313	271	< 0.40	3.2	-	3.2	4.0	880	1492	1314
M60-O ⁽³⁾	2/7/2020	Primary	24	54	45	170	313	271	< 0.40	3.2	-	3.2	4.0	880	1492	1314
M60-O ⁽³⁾	3/10/2020	Primary	25	54	45	170	313	271	0.43 J	3.2	-	3.2	4.0	890	1492	1314
M61-LBF	1/21/2020	Primary	7.4	13	12	53	200	200	0.65	3.2	-	3.2	4.0	430	852	769
MW-01-LBF	1/9/2020	Primary	25	47	43	180	340	307	< 0.40	3.2	-	3.2	4.0	920	1711	1543
MW-01-O	1/9/2020	Primary	25	48	42	170	254	229	< 0.40	3.2	-	3.2	4.0	930	1563	1409
Arizona Aquifer Water Quality Standard ⁽¹⁾			--	--	--	--	--	--	4.0	--	--	--	--	--	--	--

Notes:

All results in milligrams per liter (mg/L)

Detects are **bolded**.

Non-detects are reported to the laboratory method detection limit (< MDL).

AQL = Aquifer Quality Limit

J = estimated results

Temp APP = Temporary Aquifer Protection Permit No. 106360

UIC = Underground Injection Control Permit No. R9UIC-AZ3-FY11-1

(1) Arizona Aquifer Water Quality Standard (AWQS), Drinking Water Standard, 31 December 2016.

(2) Increased frequency monitoring conducted on 2/12/2020 and 3/10/2020.

(3) Verification and increased frequency monitoring conducted on 2/7/2020 and 3/10/2020.

Alert Level Exceedance

TABLE 3

Q1 2020 WELL M57-O MONTHLY MONITORING SUMMARY

FLORENCE COPPER INC.

FLORENCE, ARIZONA

Parameter	Units	TEMP APP Alert Level	UIC Alert Level	UIC AQL	M57-O-010920	M.99-B-010920	M57-O-021220	M57-O-031020
					01/09/2020	01/09/2020	02/12/2020	03/10/2020
					Primary	Split	Primary	Primary
Level 1 Parameters								
Magnesium, Dissolved	mg/L	20	18	--	19	21	13	16
Sulfate	mg/L	200	200	--	150	128	98	110
Fluoride	mg/L	3.2	3.2	4	< 0.40	0.439	0.50	0.62
Total Dissolved Solids (TDS)	mg/L	934	842	--	600	670	630	650
Inorganic Parameters								
Alkalinity, Bicarbonate	mg/L	--	--	--	110	107	--	--
Alkalinity, Carbonate	mg/L	--	--	--	< 2.0	< 2.0	--	--
Alkalinity, Hydroxide	mg/L	--	--	--	< 2.0	< 2.0	--	--
Alkalinity, Total	mg/L	--	--	--	110	107	--	--
Calcium, Dissolved	mg/L	--	--	--	81.0	86.8	--	--
Cation/Anion Balance	meq/L	--	--	--	6.59	4.60	--	--
Chloride	mg/L	--	--	--	200	204	--	--
Nitrate (as N)	mg/L	--	8	10	4.70	4.88	--	--
Nitrite (as N)	mg/L	--	0.8	1	< 0.018	< 0.0277	--	--
Potassium, Dissolved	mg/L	--	--	--	5.20	5.74	--	--
Sodium, Dissolved	mg/L	--	--	--	110	126	--	--
pH, Lab	pH units	--	--	--	7.7	7.6	7.6	7.8
Conductivity, lab	µmhos/cm	--	--	--	1,200	1,100	950	1,100
Radiological Parameters								
Gross Alpha Analytes	pCi/L	15	--	--	10.7 ± 0.7	10.3 ± 1.1	--	--
Gross Alpha Analytes Adjusted	pCi/L	26.5	12	15	--	3.8 ± 1.4	--	--
Gross Beta Analytes	pCi/L	--	16	16	8.5 ± 1.4	7.3 ± 1.4	--	--
Radium-226 & 228	pCi/L	17.2	4	5	1.8 ± 0.4	1.2 ± 0.2	--	--
Radon-222	pCi/L	--	11180	--	6,363.8 ± 637.2	5,853.0 ± 586.1	--	--
Total Uranium Isotopes	pCi/L	--	--	--	--	6.5 ± 0.9	--	--
Organic Parameters								
Benzene	µg/L	4	4	5	< 0.063	< 0.331	--	--
Ethylbenzene	µg/L	560	560	700	< 0.054	< 0.384	--	--
Naphthalene	µg/L	--	3.5	3.5	< 0.073	< 1.00	--	--
Octane	µg/L	--	0.9	0.9	< 0.50	< 0.390	--	--
Toluene	µg/L	800	800	1000	0.10 J	< 0.412	--	--
Total Petroleum Hydrocarbons - Diesel	mg/L	--	0.28	--	--	< 0.0222	--	--
Xylene (total)	µg/L	8000	8000	10000	< 0.13	< 1.06	--	--
Trace Metals								
Aluminum, Dissolved	mg/L	0.16	0.16	--	< 0.0131	< 0.0081	--	--
Antimony, Dissolved	mg/L	0.0048	0.0048	0.006	< 0.000039	< 0.000077	--	--
Arsenic, Dissolved	mg/L	0.026	0.026	0.05	0.0011	0.00097	--	--
Barium, Dissolved	mg/L	1.6	1.6	2	0.014	0.0165	--	--
Beryllium, Dissolved	mg/L	0.0032	0.0032	0.004	< 0.000013	< 0.000054	--	--
Cadmium, Dissolved	mg/L	0.004	0.004	0.005	< 0.000050	0.00093	--	--
Chromium, Dissolved	mg/L	0.08	0.08	0.1	0.0072	0.0026	--	--
Cobalt, Dissolved	mg/L	0.002	0.002	--	0.00025 J	< 0.000085	--	--
Copper, Dissolved	mg/L	0.8	0.8	1	0.0087	0.0077	--	--
Iron, Dissolved	mg/L	1.4	0.24	--	0.016 J	< 0.0115	--	--
Lead, Dissolved	mg/L	0.04	0.04	0.05	< 0.000057	< 0.000046	--	--
Manganese, Dissolved	mg/L	0.52	0.04	--	0.0017	0.0016	--	--
Mercury, Dissolved	mg/L	0.0016	0.0016	0.002	< 0.000041	< 0.000039	--	--
Nickel, Dissolved	mg/L	0.08	0.08	--	0.0099	< 0.00015	--	--
Selenium, Dissolved	mg/L	0.04	0.04	0.05	0.0025 J	0.0010	--	--
Thallium, Dissolved	mg/L	0.0016	0.0016	0.002	< 0.000023	< 0.000047	--	--
Uranium, Total	mg/L	--	0.0135	--	0.011	0.008	--	--
Zinc, Dissolved	mg/L	4	4	--	< 0.0023	< 0.0024	--	--

Notes:Detects are **bolded**.

Non-detects are reported to the laboratory method detection limit (< MDL).

AL = Alert Level

AQL = Aquifer Quality Limit

J = estimated result

meq/L = milliequivalents per liter

mg/L = milligrams per liter

pCi/L = picocuries per liter

Temp APP = Temporary Aquifer Protec on Permit No. 106360

UIC = Underground Injec on Permit No. R9UIC-AZ3-FY11-1

µg/L = micrograms per liter

µ mhos/cm = micromhos per centimeter

Alert Level Exceedance

TABLE 4**Q1 2020 WELL M60-O MONTHLY MONITORING SUMMARY**

FLORENCE COPPER INC.

FLORENCE, ARIZONA

Parameter	Units	TEMP APP Alert Level	UIC Alert Level	UIC AQL	M60-O-010820	M60-O-020720	M60-O-031020
					01/08/2020	02/07/2020	03/10/2020
					Primary	Primary	Primary
Level 1 Parameters							
Magnesium, Dissolved	mg/L	54	45	--	26	24	25
Sulfate	mg/L	313	271	--	190	170	170
Fluoride	mg/L	3.2	3.2	4	< 0.40	< 0.40	0.43 J
Total Dissolved Solids (TDS)	mg/L	1492	1314	--	880	880	890
Inorganic Parameters							
Alkalinity, Bicarbonate	mg/L	--	--	--	220	--	--
Alkalinity, Carbonate	mg/L	--	--	--	< 2.0	--	--
Alkalinity, Hydroxide	mg/L	--	--	--	< 2.0	--	--
Alkalinity, Total	mg/L	--	--	--	220	--	--
Calcium, Dissolved	mg/L	--	--	--	120	--	--
Cation/Anion Balance	meq/L	--	--	--	5.29	--	--
Chloride	mg/L	--	--	--	220	--	--
Nitrate (as N)	mg/L	--	16.3	16.3	9.0	--	--
Nitrite (as N)	mg/L	--	0.8	1	0.037 J	--	--
Potassium, Dissolved	mg/L	--	--	--	5.6	--	--
Sodium, Dissolved	mg/L	--	--	--	140	--	--
pH, Lab	pH units	--	--	--	7.7	7.3	7.6
Conductivity, Lab	μmhos/cm	--	--	--	1,600	1,600	1,500
Radiological Parameters							
Gross Alpha Analytes	pCi/L	15	--	--	47.8 ± 2.3	47.0 ± 1.6	47.0 ± 1.7
Gross Alpha Analytes Adjusted	pCi/L	26.5	17.4	17.4	17.8 ± 3.0	12.6 ± 2.6	14.8 ± 2.6
Gross Beta Analytes	pCi/L	--	33	33	25.3 ± 1.9	--	--
Radium-226 & 228	pCi/L	17.2	13.9	13.9	8.9 ± 0.6	--	--
Radon-222	pCi/L	--	2480	--	1,168.7 ± 117.9	--	--
Total Uranium	pCi/L	--	--	--	30.0 ± 1.9	34.4 ± 2.1	32.2 ± 2.0
Organic Parameters							
Benzene	μg/L	4	4	5	< 0.063	--	--
Ethylbenzene	μg/L	560	560	700	< 0.054	--	--
Naphthalene	μg/L	--	3.5	3.5	< 0.073	--	--
Octane	μg/L	--	0.9	0.9	< 0.50	--	--
Toluene	μg/L	800	800	1000	< 0.057	--	--
Total Petroleum Hydrocarbons - Diesel	mg/L	--	0.28	--	< 0.096	--	--
Xylene (total)	μg/L	8000	8000	10000	< 0.13	--	--
Trace Metals							
Aluminum, Dissolved	mg/L	0.16	0.16	--	< 0.0131	--	--
Antimony, Dissolved	mg/L	0.0048	0.0048	0.006	0.000053 J	--	--
Arsenic, Dissolved	mg/L	0.026	0.026	0.05	0.0015	--	--
Barium, Dissolved	mg/L	1.6	1.6	2	0.039	--	--
Beryllium, Dissolved	mg/L	0.0032	0.0032	0.004	< 0.000013	--	--
Cadmium, Dissolved	mg/L	0.004	0.004	0.005	0.000077 J	--	--
Chromium, Dissolved	mg/L	0.08	0.08	0.1	0.009	--	--
Cobalt, Dissolved	mg/L	0.002	0.002	--	0.00072	--	--
Copper, Dissolved	mg/L	0.8	0.8	1	0.0079	--	--
Iron, Dissolved	mg/L	1.4	0.24	--	< 0.031	--	--
Lead, Dissolved	mg/L	0.04	0.04	0.05	0.0016 J	--	--
Manganese, Dissolved	mg/L	0.52	0.07	--	0.0017	--	--
Mercury, Dissolved	mg/L	0.0016	0.0016	0.002	< 0.0000041	--	--
Nickel, Dissolved	mg/L	0.2	0.2	--	0.037	--	--
Selenium, Dissolved	mg/L	0.04	0.04	0.05	0.003	--	--
Thallium, Dissolved	mg/L	0.0016	0.0016	0.002	0.00040 J	--	--
Uranium, Total	mg/L	0.16	0.0612	--	0.043	0.045	--
Zinc, Dissolved	mg/L	4	4	--	0.0038 J	--	--

Notes:Detects are **bolded**.

Non-detects are reported to the laboratory method detection limit (< MDL).

AL = Alert Level

AQL = Aquifer Quality Limit

J = estimated result

meq/L = milliequivalents per liter

mg/L = milligrams per liter

pCi/L = picocuries per liter

Temp APP = Temporary Aquifer Protection Permit No. 106360

UIC = Underground Injection Permit No. R9UIC-AZ3-FY11-1

μg/L = micrograms per liter

μ mhos/cm = micromhos per centimeter

Alert Level Exceedance

APPENDIX A

Data Quality Assurance/Quality Control Summary Memorandum



HALEY & ALDRICH, INC.
One Arizona Center
400 E. Van Buren St., Suite 545
Phoenix, AZ 85004
602.760.2450

MEMORANDUM

20 April 2020
File No. 133887-004

TO: Haley & Aldrich, Inc.
Sarah Cooper, P.E.

FROM: Haley & Aldrich, Inc.
Alexis Rainery, Engineer
Katherine Miller, Project Manager

SUBJECT: Appendix A – Data Quality Assurance/Quality Control Summary

Analytical results for environmental samples collected during the first quarter 2020 compliance monitoring event were verified in accordance with guidance provided by the U.S. Environmental Protection Agency [USEPA], 2012]¹. For each laboratory data package, the following quality control/quality assurance criteria from the analysis of the project samples were reviewed:

- Completeness with the chain of custody (COC);
- Comparison of reporting limits to alert levels (AL) and aquifer quality limits (AQL);
- Holding times/preservation;
- Blank sample analysis;
- Surrogate recovery compliance;
- Laboratory control samples;
- Matrix spike samples;
- Laboratory and field duplicate sample analysis; and
- Verification of laboratory report data.

Sample data was qualified by the laboratory in accordance with laboratory standard operating procedures (SOP). Based on a check of the data qualifiers assigned to the project sample results, these flags were applied to the reported results in accordance with the laboratory-specific SOP.

¹ USEPA, 2012. USEPA Region 9 Guidance for Quality Assurance Program Plans, R9QA/03.2. March.

COMPLETENESS WITH CHAIN OF CUSTODY

Samples were collected, preserved, and shipped following standard COC protocol. Samples were also received appropriately, identified correctly, and analyzed according to the COC. COCs were appropriately signed and dated by the field and/or laboratory personnel. The following exceptions were noted:

- Custody seals were not used on the sample cooler(s) because a laboratory courier picked up the samples.

REPORTING LIMITS

The reporting limits and/or method detection limits were at or below the applicable ALs and AQLs.

HOLDING TIMES/PRESERVATION

The samples arrived at the laboratory at the proper temperature and were prepared and analyzed within the holding time and preservation criteria specified as per each method's protocol with the following exceptions:

Laboratory Report	Method	Matrix	Holding Time	Preservation	Sample ID, Violation, Qualification
20A0243	USEPA 150.1	Water	15 minutes (Field method)	Cool to $\leq 6^{\circ}\text{C}$	The following samples were analyzed outside the holding time by the laboratory per client request: M60-O-010820
20A0254	USEPA 150.1	Water	15 minutes (Field method)	Cool to $\leq 6^{\circ}\text{C}$	The following samples were analyzed outside the holding time by the laboratory per client request: M55-UBF-010820 M56-LBF-010820 M58-O-010820
20A0305	USEPA 150.1	Water	15 minutes (Field method)	Cool to $\leq 6^{\circ}\text{C}$	The following samples were analyzed outside the holding time by the laboratory per client request: M54-O-010920 MW-01-LBF-010920 MW-01-O-010920
20A0306	USEPA 150.1	Water	15 minutes (Field method)	Cool to $\leq 6^{\circ}\text{C}$	The following sample was analyzed outside the holding time by the laboratory per client request: M57-O-010920

Laboratory Report	Method	Matrix	Holding Time	Preservation	Sample ID, Violation, Qualification
10504979	SM 4500-H+B	Water	15 minutes (Field method)	Cool to ≤ 6 °C	The following sample was analyzed outside the holding time by the laboratory per client request: M.99-B-010920 (Split for M57-O)
10504979	USEPA 300.0	Water	48 hours	Cool to ≤ 4 °C	The following samples were analyzed outside the holding time by the laboratory per client request: M.99-B-010920 (Split for M57-O)
20A0457	USEPA 150.1	Water	15 minutes (Field method)	Cool to ≤ 6 °C	The following samples were analyzed outside the holding time by the laboratory per client request: M15-GU-011620 M22-O-011620 M23-UBF-011620 M54-LBF-011620
10505646	SM 4500-H+B	Water	15 minutes (Field method)	Cool to ≤ 6 °C	The following sample was analyzed outside the holding time by the laboratory per client request: M23-UBF-011620
20A0493	USEPA 150.1	Water	15 minutes (Field method)	Cool to ≤ 6 °C	The following sample was analyzed outside the holding time by the laboratory per client request: M52-UBF-012020
20A0518	USEPA 150.1	Water	15 minutes (Field method)	Cool to ≤ 6 °C	The following sample was analyzed outside the holding time by the laboratory per client request: M61-LBF-012120
20B0270	USEPA 150.1	Water	15 minutes (Field method)	Cool to ≤ 6 °C	The following sample was analyzed outside the holding time by the laboratory per client request: M60-O-020720
20B0270	ALL	Water	Various	Cool to ≤ 6 °C	The cooler containing the following sample was received warm at 12.4 degrees Celsius (°C): M60-O-020720 However, the cooler was delivered same day as sample collection and there is evidence chilling had begun.
20B0417	USEPA 150.1	Water	15 minutes (Field method)	Cool to ≤ 6 °C	The following sample was analyzed outside the holding time by the laboratory per client request: M14-GL-021220

Laboratory Report	Method	Matrix	Holding Time	Preservation	Sample ID, Violation, Qualification
20B0417	ALL	Water	Various	Cool to $\leq 6^{\circ}\text{C}$	The cooler containing the following sample was received warm at 7.6 degrees Celsius ($^{\circ}\text{C}$): M57-O-021220
20B0417	SM2540 C	Water	7 days	Cool to $\leq 6^{\circ}\text{C}$	TDS was confirmed 9 days beyond sample hold time for sample M57-O-021220. Both initial and confirmation results were reported. The higher, confirmation result is used for reporting purposes.
20B0557	USEPA 150.1	Water	15 minutes (Field method)	Cool to $\leq 6^{\circ}\text{C}$	The following sample was analyzed outside the holding time by the laboratory per client request: M59-O-022120
20B0557	All	Water	Various	Cool to $\leq 6^{\circ}\text{C}$	The cooler containing the following sample was received warm at 11.1 degrees Celsius ($^{\circ}\text{C}$): M59-O-022120 However, the cooler was delivered same day as sample collection and there is evidence chilling had begun.
20C0314	USEPA 150.1	Water	15 minutes (Field method)	Cool to $\leq 6^{\circ}\text{C}$	The following sample was analyzed outside the holding time by the laboratory per client request: M60-O-031020
20C0315	USEPA 150.1	Water	15 minutes (Field method)	Cool to $\leq 6^{\circ}\text{C}$	The following sample was analyzed outside the holding time by the laboratory per client request: M57-O-031020
20C0557	USEPA 150.1	Water	15 minutes (Field method)	Cool to $\leq 6^{\circ}\text{C}$	The following sample was analyzed outside the holding time by the laboratory per client request: M59-O-032120
Notes:					
$^{\circ}\text{C} = \text{degrees Celsius}$					
$\text{mg/L} = \text{milligrams per liter}$					
<i>SM = Standard Method</i>					
<i>TDS = total dissolved solids</i>					
<i>USEPA = U.S. Environmental Protection Agency</i>					

BLANK SAMPLE ANALYSIS

Trip blanks are prepared when volatile analysis is requested to identify contamination that may have been introduced during transport. The analysis of the blank samples for field quality control was free of target compounds, with the following exception:

Laboratory Report	Sample ID	Analyte Detected in Trip Blank	Concentration (mg/L)
20A0243	8260 TB-010820	Toluene	0.13 J
Notes:			
J = estimated			
mg/L = milligrams per liter			

Method blank samples had no detections, indicating that no contamination from laboratory activities occurred with the following exceptions:

Laboratory Report	Sample ID	Batch ID	Analyte Detected in Method Blank	Concentration (mg/L)
20A0243, 20A0306	M60-O-010820 8260 TB-010820 M57-O-010920 TB8260-010920	2001094	Arsenic	0.00011 J
			Barium	0.00022 J
			Cadmium	0.000055 J
			Chromium	0.00030 J
			Cobalt	0.000049 J
			Lead	0.00011 J
			Nickel	0.000071 J
20A0243	M60-O-010820 8260 TB-010820	2001095	Uranium	0.000019 J
10504879	M.99-B (Split for M57-O)	654288	Mercury, dissolved	0.0040 J
20A0518	M61-LBF-012120	2002009	Magnesium	0.28 J
Notes:				
J = estimated				
mg/L = milligrams per liter				

SURROGATE RECOVERY COMPLIANCE

The percent recovery for each surrogate compound added to each project sample was determined to be within the laboratory specified quality control limits.

LABORATORY CONTROL AND MATRIX SPIKE SAMPLES

Compounds associated with the laboratory control sample and laboratory control sample duplicate and matrix spike and matrix spike duplicate analyses exhibited recoveries and relative percent differences (RPD) within the specified limits with the following exceptions:

Laboratory Report	Sample ID	Sample Type	Method	Batch ID/Parent Sample ID	Analyte	%R, RPD	Acceptable %R, RPD
20A0305	MW-01-LBF-010920	MS/MSD	USEPA 300.0	2001123	Sulfate	77%/76%	80-120%
	M54-O-010920	MS	USEPA 300.0	2001123	Sulfate	175%	80-120%
20A0306	2001110-BSD1	LCSD	USEPA 300.0	2001110	Fluoride	314%/147%	90-110%
10504979	M.99-B (Split for M57-O)	MS/MSD	USPEA 200.8	654387	Calcium, dissolved	-179%/-110%	70-130%
					Sodium dissolved	-445%/-265%	70-130%
	RPD	USEPA 8260B	1413738	Naphthalene	34.6	20	
	TB #239190	LCSD	USEPA 8260B	1411424	o-Xylene	79%	80-122%
20C0314	M60-O-031020	MS/MSD	USEPA 300.0	2003278	Sulfate	210%/66%	80-120%
Notes:							
% = percent							
%R = percent recovery							
LCS = laboratory control sample							
LCSD = laboratory control sample duplicate							
MS = matrix spike							
MSD = matrix spike duplicate							
RPD = relative percent difference							
USEPA = U.S. Environmental Protection Agency							

LABORATORY AND FIELD DUPLICATE SAMPLES

The RPDs for laboratory duplicate analysis were all below 20 percent for water (or the absolute difference rule was satisfied if detects were less than 5 times the reporting limit).

VERIFICATION OF LABORATORY REPORT DATA

A minimum of 10 percent of the data reported by the laboratory was verified against the electronic data deliverables.

\haleyaldrich.com\share\phx_common\Projects\Florence Copper\133887 Quarterly Monitoring\Deliverables\1Q 2020 Reports\1Q 2020 Temp APP Report\Attachments\APP 10 UIC 6 Quarterly Compliance Monitoring Report\Appendix A QA_QC Summary Q12020_D5.docx

ATTACHMENT 7

Results of Monthly Lixiviant Organic Analysis

TABLE 1**MONTHLY LIXIVIANT (RAFFINATE) MONITORING RESULTS**

FLORENCE COPPER INC.

FLORENCE, ARIZONA

Analyte	Units	Sample Date		
		1/14/2020	2/27/2020	3/11/2020
Benzene	mg/L	<0.0005	<0.0005	<0.0005
Ethylbenzene	mg/L	<0.0005	<0.0005	<0.0005
n-Octane	mg/L	<0.0005	<0.0005	<0.0005
Naphthalene	mg/L	<0.002	<0.002	<0.002
Toluene	mg/L	<0.0005	<0.0005	<0.0005
Xylenes, Total	mg/L	<0.0015	<0.0015	<0.0015
TPH-Diesel	mg/L	<0.1 ¹	0.9	8.8
Total Organics	mg/L	<0.1	0.9	8.8
Maximum Allowable Average Total Organics	mg/L	10	10	10

Notes:¹ TPH-Diesel sample collected on 01/29/2020

mg/L = milligrams per liter

TPH = total petroleum hydrocarbons

ATTACHMENT 8

Results of Mechanical Integrity Testing

MECHANICAL INTEGRITY TESTING

FLORENCE COPPER INC.

FLORENCE, ARIZONA

Q1 2020 Mechanical Integrity Tests			
Well ID	Temperature Log Date	Pressure Test Date	Pass (P) Fail (F)
WB-01	3/12/2020	--	P
WB-02	3/12/2020	--	P
WB-03	3/12/2020	--	P
WB-04	3/12/2020	--	P

Notes:*Temperature log report submitted to the United States Environmental Protection Agency under separate cover.*

ATTACHMENT 9

Results of Annular Conductivity Device Monitoring



ANNULAR CONDUCTIVITY DATA QA PROCEDURE & DOCUMENTATION FORM (V.1)

GENERAL

HGI Project Name: 2018-030 – FCP Bulk & Annular Conductivity Monitoring	Project Site: Florence Copper Project	Weather Conditions: 66°F, Sunny
Date <u>10 January 2020</u>	Field Operator Name: <u>L. Salgado</u>	Start and End Time: <u>1430 - 1610</u>
EQUIPMENT		DIAGNOSTICS (See back of sheet for detailed instructions and procedures)
AGI MiniSting (MS) Serial #: S0608049 HGI Cray Interface Panel SN# CR-ES-002		6Ω Resistor Standard Result: <u>6.424</u> Pass Criteria: $6.25\Omega \pm 0.30$ Circle One: <u>Pass or Fail</u>
		<ul style="list-style-type: none"> • No. Cycles: <u>4</u> • Max Error: <u>Off</u> • Max Current: <u>50mA</u> • Measure Time: <u>3.6</u> • Measure mode: <u>RESISTANCE</u>

DATA COLLECTION:

WELL ID	Time (24h)	Current (1 mA)	1			2			3			Data Acceptance Pass = P, Fail = F	
			Reading	Resistance ($\Delta Y = \Omega$)	Error ($\sigma = \%$)	Reading	Resistance ($\Delta Y = \Omega$)	Error ($\sigma = \%$)	Reading	Resistance ($\Delta Y = \Omega$)	Error ($\sigma = \%$)		
1	WB-04	1530	20	284	62.37	2.3	285	62.83	2.3	286	62.89	2.7	P
2	WB-03	1534	20	287	76.41	1.0	288	76.46	1.8	289	76.59	2.0	P
3	WB-02	1544	20	293	78.64	2.5	294	79.37	2.3	295	79.06	2.4	P
4	WB-01	1539	20	290	51.21	0.7	291	49.94	1.5	292	49.54	1.6	P
5	B-01	1506	20	272	64.84	0.7	273	63.85	0.6	274	63.47	0.8	P
6	B-07	1512	20	275	57.45	0.9	276	56.82	0.9	277	55.52	1.0	P
7	B-06	1517	20	278	58.28	0.8	279	56.80	1.2	280	55.25	1.4	P
8	B-05	1524	20	281	64.33	0.4	282	63.45	0.4	283	63.1	0.5	P
9	B-04	1550	20	295	56.99	1.1	297	55.50	0.8	298	55.03	0.8	P
10	B-03	1557	20	299	49.48	0.7	300	48.43	0.8	301	48.08	0.9	P
11	B-02	1606	20	302	63.00	1.4	303	62.86	1.5	304	62.52	1.6	P

DATA QUALITY ACCEPTANCE	FIELD OBSERVATIONS
Measurement Error Evaluation Pass Criteria: 66% (2/3) of measurement error values less than 5%	(Briefly describe site activities at time of data acquisition, status of electrode arrays, or other parameters that may influence readings) Techs checking on wells. Polling pump, setup at B-03.
SIGNATURES	
By signing, I certify that data collection instruments have all required tests and the data collection process follows standard setup and procedure instructions listed within this procedure.  <u>10 Jan 2020</u> Field Operator Signature/Date	By signing, I certify that I have passed required data quality tests listed within this procedure.  <u>11 Jan 2020</u> Data Inspector Signature/Date

ATTACHMENT 10

Table of Monthly Casing Annulus and Injection Pressures

Q1 2020 DAILY WELLHEAD PRESSURES - INJECTION WELLS

Page 1 of 3

FLORENCE COPPER INC.

FLORENCE, ARIZONA

Table 1. January 2020 Daily Wellhead Pressures - Injection Wells

Date	I-01			I-02			I-03			I-04			Fracture Gradient
	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	
1/1/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/2/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/3/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/4/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/5/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/6/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/7/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/8/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/9/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/10/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/11/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/12/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/13/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.26	0.00	18.72	112.90
1/14/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.09	0.00	19.86	112.90
1/15/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.95	0.00	18.51	112.90
1/16/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.30	0.00	19.34	112.90
1/17/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	112.90
1/18/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/19/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/20/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/21/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.91	0.00	5.85	0.00	112.90
1/22/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	112.90
1/23/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/24/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/25/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/26/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/27/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/28/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/29/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	112.90
1/30/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/31/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90

Notes:

All measurements in pounds per square inch (psi)

NM = Not measured or otherwise not available

Calculation of Pressure Allowed at the Wellhead from the Allowed Fracture Gradient

P-Wellhead = P-TOS - P-Col = [P-Frac x D-TOS] - [D-TOS / Conv] Where:

P-Fracture	= Pressure allowed at the top of the injection well screen (TOS)	=	0.65	psi/foot of depth
D-TOS	= Depth to top of injection well screens	=	520	feet
P-TOS	= Total pressure allowed at top of screen = P-Fracture x D-TOS	= 0.65 psi/foot x 520 feet	338	psi
Conv	= Feet of Water per psi	=	2.31	feet/psi
P-Col	= Pressure from weight of water column at TOS	= 520 feet / 2.31 feet/psi	225.11	psi
P-Wellhead	= Allowable pressure at the top of the wellhead = P-TOS - P-Col	= 338 psi - 255.1 psi	112.89	psi

Q1 2020 DAILY WELLHEAD PRESSURES - INJECTION WELLS

Page 2 of 3

FLORENCE COPPER INC.

FLORENCE, ARIZONA

Table 2. February 2020 Daily Wellhead Pressures - Injection Wells

Date	I-01			I-02			I-03			I-04			Fracture Gradient
	Avg	Min	Max										
2/1/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/2/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/3/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/4/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/5/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/6/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/7/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/8/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/9/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/10/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/11/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/12/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/13/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/14/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/15/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/16/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/17/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/18/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/19/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/20/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/21/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	112.90
2/22/2020	0.01	0.00	0.67	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.00	1.87	112.90
2/23/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/24/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.03	112.90
2/25/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/26/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/27/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/28/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/29/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90

Notes:

All measurements in pounds per square inch (psi)

NM = Not measured or otherwise not available

Calculation of Pressure Allowed at the Wellhead from the Allowed Fracture Gradient

P-Wellhead = P-TOS - P-Col = [P-Frac x D-TOS] - [D-TOS / Conv] Where:

P-Fracture	= Pressure allowed at the top of the injection well screen (TOS)	=	0.65	psi/foot of depth
D-TOS	= Depth to top of injection well screens	=	520	feet
P-TOS	= Total pressure allowed at top of screen = P-Fracture x D-TOS	= 0.65 psi/foot x 520 feet	338	psi
Conv	= Feet of Water per psi	=	2.31	feet/psi
P-Col	= Pressure from weight of water column at TOS	= 520 feet / 2.31 feet/psi	225.11	psi
P-Wellhead	= Allowable pressure at the top of the wellhead = P-TOS - P-Col	= 338 psi - 255.1 psi	112.89	psi

Q1 2020 DAILY WELLHEAD PRESSURES - INJECTION WELLS

Page 3 of 3

FLORENCE COPPER INC.

FLORENCE, ARIZONA

Table 3. March 2020 Daily Wellhead Pressures - Injection Wells

Date	I-01			I-02			I-03			I-04			Fracture Gradient
	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	Avg	Min	Max	
3/1/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/2/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/3/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/4/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/5/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/6/2020	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/7/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/8/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/9/2020	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/10/2020	0.00	0.00	0.08	0.00	0.09	0.09	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/11/2020	0.00	0.00	0.00	1.27	0.07	3.16	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/12/2020	0.00	0.00	0.00	3.58	0.00	6.37	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/13/2020	0.00	0.00	0.00	4.07	2.05	5.61	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/14/2020	0.00	0.00	0.00	5.62	3.24	11.03	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/15/2020	0.00	0.00	0.00	6.77	5.05	8.21	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/16/2020	0.00	0.00	0.00	19.48	5.45	53.64	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/17/2020	0.00	0.00	0.00	22.95	19.57	26.88	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/18/2020	0.00	0.00	0.00	26.22	22.65	29.82	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/19/2020	0.00	0.00	0.00	26.74	24.74	27.72	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/20/2020	0.00	0.00	0.00	25.31	1.89	29.63	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/21/2020	0.00	0.00	0.00	25.70	23.72	27.83	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/22/2020	0.00	0.00	0.03	76.23	0.00	90.45	0.00	0.00	0.03	0.00	0.00	0.03	112.90
3/23/2020	0.00	0.00	0.00	78.99	50.24	90.30	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/24/2020	0.00	0.00	0.00	78.38	75.95	85.23	0.00	0.00	0.00	44.62	0.00	49.54	112.90
3/25/2020	0.00	0.00	0.00	78.89	72.61	88.74	0.00	0.00	0.00	44.14	0.00	50.89	112.90
3/26/2020	0.00	0.00	0.00	82.24	76.48	85.65	0.00	0.00	0.00	15.45	0.00	50.98	112.90
3/27/2020	0.00	0.00	0.00	85.40	83.42	87.52	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/28/2020	0.00	0.00	0.00	86.06	76.90	89.91	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/29/2020	0.00	0.00	0.00	87.72	58.75	91.33	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/30/2020	0.00	0.00	0.00	86.89	0.00	91.33	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/31/2020	0.00	0.00	0.00	87.22	45.12	98.67	0.00	0.00	0.00	0.00	0.00	0.00	112.90

Notes:

All measurements in pounds per square inch (psi)

NM = Not measured or otherwise not available

Well I-02 injection was focused in the lowest zone starting in March. Focusing on this zone resulted in increased injection pipeline pressures due to decreasing conductivities in the deeper portions of the bedrock oxide unit. Pressures are being closely monitored to stay below the alert limit.

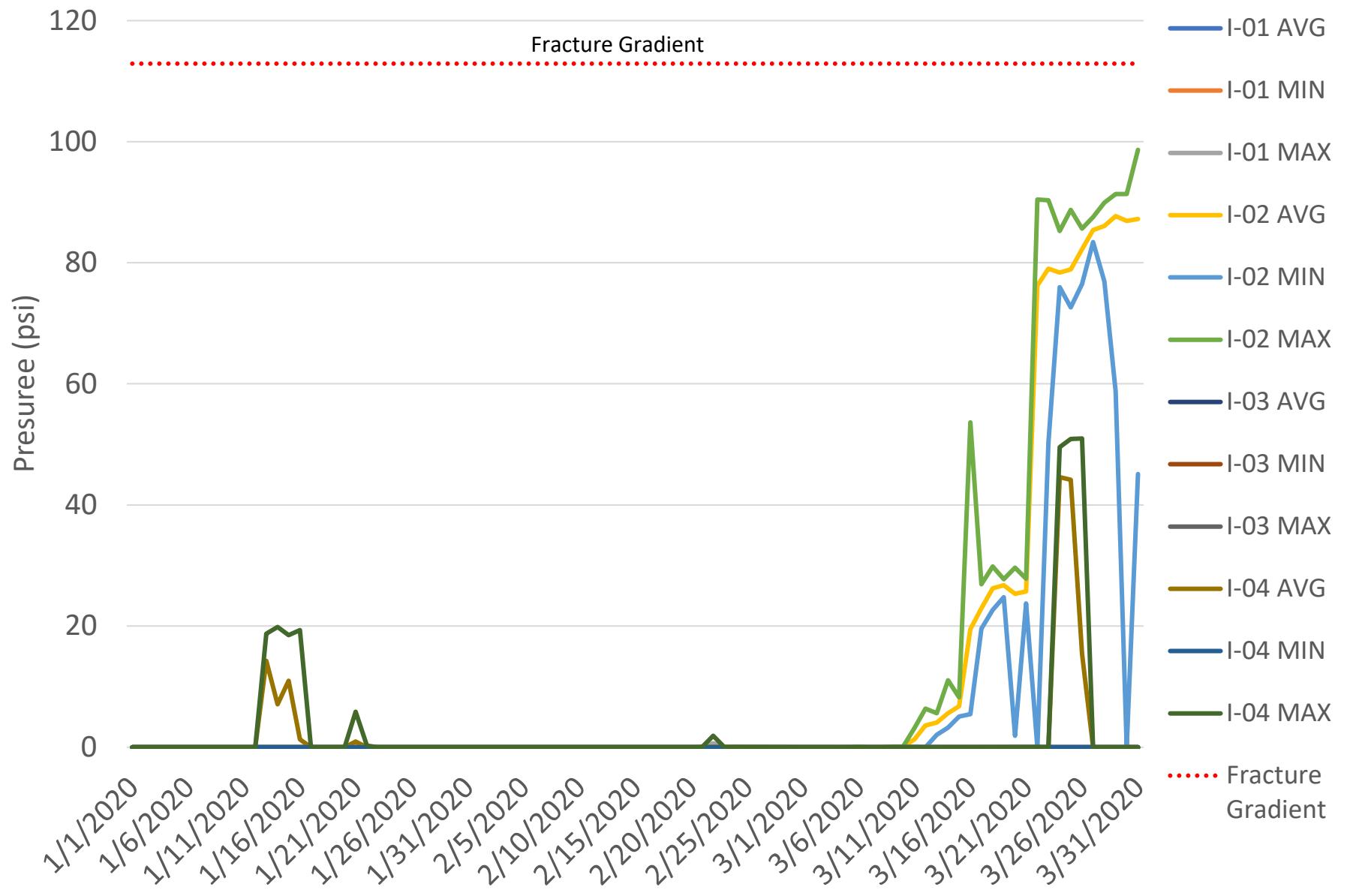
Well I-04 injection rate was increased during the period March 24 - 26. Pressures returned to zero when injection rate was decreased.

Calculation of Pressure Allowed at the Wellhead from the Allowed Fracture Gradient

P-Wellhead = P-TOS - P-Col = [P-Frac x D-TOS] - [D-TOS / Conv] Where:

P-Fracture	= Pressure allowed at the top of the injection well screen (TOS)	=	0.65	psi/foot of depth
D-TOS	= Depth to top of injection well screens	=	520	feet
P-TOS	= Total pressure allowed at top of screen = P-Fracture x D-TOS	= 0.65 psi/foot x 520 feet	338	psi
Conv	= Feet of Water per psi	=	2.31	feet/psi
P-Col	= Pressure from weight of water column at TOS	= 520 feet / 2.31 feet/psi	225.11	psi
P-Wellhead	= Allowable pressure at the top of the wellhead = P-TOS - P-Col	= 338 psi - 255.1 psi	112.89	psi

Figure 1. Q1 2020 Daily Wellhead Pressures - Injection Wells



Q1 2020 DAILY CASING ANNULUS PRESSURES - INJECTION WELLS

Page 1 of 3

FLORENCE COPPER INC.

FLORENCE, ARIZONA

Table 4. January 2020 Daily Casing Annulus Pressures - Injection Wells

Date	I-01			I-02			I-03			I-04			Fracture Gradient
	Avg	Min	Max										
1/1/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/2/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/3/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/4/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/5/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/6/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/7/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/8/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/9/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/10/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/11/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/12/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/13/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/14/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/15/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/16/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/17/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/18/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/19/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/20/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/21/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/22/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/23/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/24/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/25/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/26/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/27/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/28/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/29/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/30/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
1/31/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90

Notes:

All measurements in pounds per square inch (psi)

There were no casing annulus pressures >0 during the first quarter of 2020

Q1 2020 DAILY CASING ANNULUS PRESSURES - INJECTION WELLS

Page 2 of 3

FLORENCE COPPER INC.

FLORENCE, ARIZONA

Table 5. February 2020 Daily Casing Annulus Pressures - Injection Wells

Date	I-01			I-02			I-03			I-04			Fracture Gradient
	Avg	Min	Max										
2/1/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/2/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/3/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/4/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/5/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/6/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/7/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/8/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/9/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/10/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/11/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/12/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/13/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/14/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/15/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/16/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/17/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/18/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/19/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/20/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/21/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/22/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/23/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/24/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/25/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/26/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/27/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/28/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
2/29/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90

Notes:

All measurements in pounds per square inch (psi)

There were no casing annulus pressures >0 during the first quarter of 2020

Q1 2020 DAILY CASING ANNULUS PRESSURES - INJECTION WELLS

Page 3 of 3

FLORENCE COPPER INC.

FLORENCE, ARIZONA

Table 6. March 2020 Daily Casing Annulus Pressures - Injection Wells

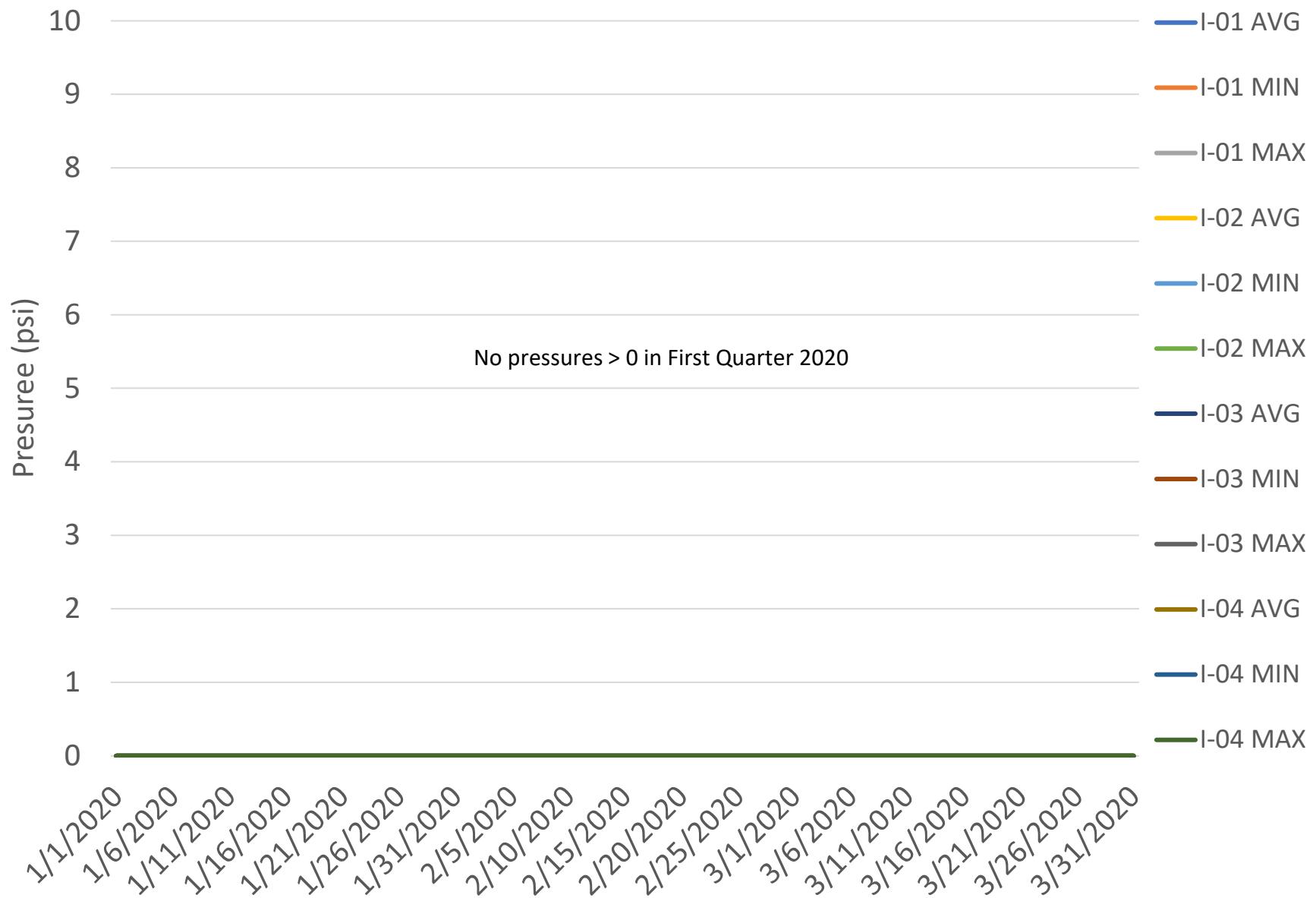
Date	I-01			I-02			I-03			I-04			Fracture Gradient
	Avg	Min	Max										
3/1/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/2/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/3/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/4/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/5/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/6/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/7/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/8/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/9/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/10/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/11/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/12/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/13/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/14/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/15/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/16/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/17/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/18/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/19/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/20/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/21/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/22/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/23/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/24/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/25/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/26/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/27/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/28/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/29/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/30/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90
3/31/2020	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	112.90

Notes:

All measurements in pounds per square inch (psi)

There were no casing annulus pressures >0 during the first quarter of 2020

Figure 2. Q1 2020 Daily Casing Annulus Pressures - Injection Wells



ATTACHMENT 11

Migratory Bird Landings

TABLE 1
Q1 2020 OBSERVED MIGRATORY BIRD LANDINGS
FLORENCE COPPER INC.
FLORENCE, ARIZONA

Date	Time	Migratory Bird Species	Comments:	Fatality (Y or N)
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Notes:

Florence Copper personnel conduct daily inspections of the Process Solution Impoundment.

No waterfowl were noted during the first quarter of 2020.